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JANIS 155

Volume No. 4 of 4

STRATEGIC INTELLIGENCE BRANCH
MILITARY INTELLIGENCE DIVISION
OFFICE, CHIEF OF ENGINEERS

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JOINT ARMY-NAVY INTELLIGENCE STUDY

OF

Celebes Sea Area (Plans)

JOINT INTELLIGENCE STUDY PUBLISHING BOARD

May . 1944

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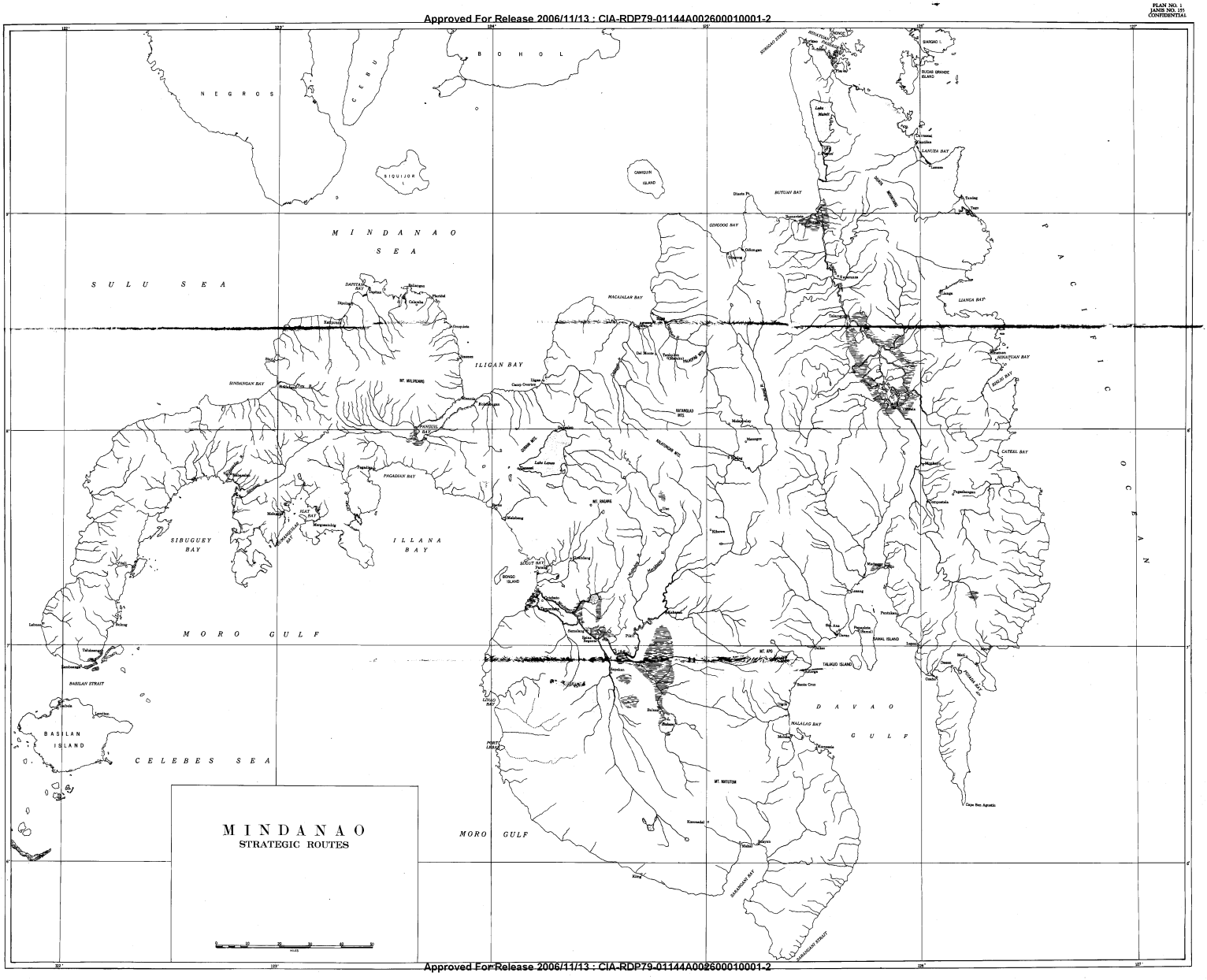
MINDANAO
STRATEGIC ROUTES
MINDANAO SEA
SULU SEA
CELEBES SEA
MORO GULF
DAVAO GULF
PACIFIC OCEAN
NEGROS
CEBU
BOHOL
SIQUIJOR I.
GIGUQUIN ISLAND
BASILAN ISLAND
SIBUGUEY BAY
ILLANA BAY
ILIGAN BAY
BUTUAN BAY
MACAJALAR BAY
DAVAO GULF
SIARGAO I.
BASILAN STRAIT
SURIGAO STRAIT
SAKARUNGAN STRAIT
MT. MALINDANG
MT. APO
MT. MATUTUM
MT. KIAMBL
MT. KITANLAD
MT. PARKER
MT. KATANGLAD
MT. KITANGLAD
MT. KITAOTAO
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PLAN NO. 2
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CELEBES SEA AREA
VEGETATION

Rain Forest
Moss Forest
Grassland
Grass and Forest
Swamp
Cultivated and Scattered Fields (including areas of secondary growth)
Plantations (coconut, abaca and pineapple)

State and Division Boundary
International Boundary
Boundary of Janis 155

STATUTE MILES
NAUTICAL MILES
KILOMETERS
Mercator Projection — Scale at Parallel 3°

NORTH BORNEO WEST OF MAIN DRAINAGE DIVIDE.
Swamp forest with clumps of sago palms on the flat lands from Jesselton to Kimanis Bay. Coconut trees along [illegible] Hills with [illegible] forest spurs extend to coast north of Jesselton. Grassy areas, cultivated patches in rice or corn, and plantations of rubber and tobacco in valleys. Much scrub growth on abandoned clearings. Mangrove swamps where rivers enter the sea.

NORTHEAST COASTAL REGION.
Greatest portion in rain forest. Mangrove and nipa swamps border much of the coast [illegible] up the larger sluggish streams where they merge into swamp forests. Coconut trees along smooth flat stretches of coast. Plantations, scattered native fields, patches of grass and secondary growth extend inland.

BASILAN ISLAND.
Forests cover over half the island. Considerable native cultivation and [illegible] on the northern and eastern parts. Scattered cultivation on south side. Mangrove swamps locally along the south and east coasts.

JOLO ISLAND.
Largely in orderly cultivation or in grass land and patches of secondary growth formerly cultivated. Most intensive cultivation around Jolo, Maimbung and Parang. Minor areas of mountain and hill country remain in forest.

TAPUL ISLAND GROUP.
Open fields and groves of tropical fruits in orderly arrangement. Back country in plantations, grass land or second growth.

TAWITAWI ISLAND.
Open cultivated fields, grass and secondary growth around Bolinsbing in the southern part. Elsewhere isolated cleared spaces amid secondary growth along the coast, grading inland through rain forest with dense undergrowth to forests with sparse undergrowth. Mangrove and nipa swamps border the south and east coasts and many of the numerous small neighboring islands.

TALAUD ISLANDS.
Dense rain forest. Coconut trees and plantations along the coasts. Scattered clearings and secondary growth back of the coastal villages.

INTERIOR NORTH BORNEO.
Forests with dense undergrowth becoming less dense with distance from coast. Isolated fields and patches of second growth. Ridge summits in virgin rain forest with sparse undergrowth.

INTERIOR – EAST BORNEO.
Mostly in forests with dense undergrowth which becomes less dense farther from the coast. Much second growth, scattered native fields of rice, corn, etc., and plantations of rubber, tobacco and coffee. Inland valley bottoms are largely in cultivated land, second growth, and tall grass.

EAST BORNEO – NORTHEAST COASTAL REGION.
Extensive areas of mangrove and nipa swamps along coasts and rivers. Swamp forests along their drier margins and along rivers farther inland.

MIDDLE EAST COASTAL REGION.
Casuarina forests along much of the low sandy coasts. Forested ridges extend to the coast. Extensive mangrove and nipa swamps at the mouths of the two largest rivers.

CELEBES, INTERIOR OF NORTHERN PENINSULA.
Rain forests cover the interior. Coastal plains include limited areas of cultivation and second growth.

Mangrove and nipa swamps on the Delta of Randangan river and farther inland. Similar smaller areas elsewhere along the coast.

MINAHASA – WEST SIDE.
Coastal plains and foothills covered with grass in most places. Some rain forests with sparse undergrowth on mountain slopes. Considerable cultivation of rice, corn, coconuts, rubber, and tobacco on flat or rolling lands.

MINAHASA – EAST SIDE.
Comparatively dry forests. Cultivated areas and grass lands formerly cultivated on flat areas and extending up the mountain slopes. Cultivated lands and grass lands. Rice paddy fields extend around Tondano Lake.

BATJAN ISLAND GROUP.
Forested islands. Forests extend to shores where coast is ragged and steep. Coconut groves along flat coasts. Plantations around Labuha and sago swamps farther inland. Mangroves on east side of Sambaki Str.

SANGIHE ISLANDS.
Coconut groves and plantations along the coasts. Native fields, or clearings with second growth inland. Rain forests in the interiors. Mangrove swamps on sheltered coasts.

NORTHERN PENINSULA—WEST SIDE.
Rain forest (Native shores except for coast south of Iboe and plantations [illegible] growth from Djailolo to Sahoe.

CENTRAL HALMAHERA.
Coconut groves along shores north of Akelamo Swamp north of village. Swamps along coasts further south with coconuts on inland margins. Dense forests inland.

VOLCANIC ISLANDS.
Native villages and fields dot the coastal regions and are more scattered inland. East side of Ternate most highly cultivated. Dense forests and second growth on mountain slopes. Mangroves common on east coasts.

MOROTAI ISLAND.
Coconut groves fringe the south and east coasts with mangrove swamps at river mouths. Dense forests throughout interior with bamboo along streams.

NORTHERN PENINSULA—EAST SIDE.
Coconut groves, fields, second growth and grass land around Ibuo, Tobelo, and Usiaki. Many scattered palms. Dense rain forests inland with bamboo thickets along streams. Grassy strips and coconuts along coast.

NORTHEASTERN PENINSULA.
Dense rain forests of the interior extend to the shores except for a few strandvlaks lined with coconut groves on the northeast coast, around Boeli-Sereni, and along Kaoe Bay.

SOUTHEASTERN PENINSULA.
Rain forests extend to the eastern shores. Coconut groves or mangrove swamps along the southern and northern coasts.

SOUTHERN PENINSULA.
Coconut trees and groves border most of the coast. Plantations, native clearings, and second growth forest around the larger settlements on coast of northern part of the peninsula. Dense rain forests throughout interior.

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No.3080

HALMAHERA

AND ADJACENT ISLANDS

EASTERN ARCHIPELAGO

From Netherland Government surveys between 1914 and 1928

SOUNDINGS IN FATHOMS reduced to approximately Low Water Springs

HEIGHTS IN FEET ABOVE MEAN SEA LEVEL

Natural Scale 1:500,000 at the Equator

EXPLANATION

Red lines and numbers indicate coastal areas that are described.

Coastal plains covering more than 3 square miles shown in green.

Marshy or swampy coastal areas shown in brown.

SCALE IN STATUTE MILES

0 10 20 30 40

Continued Northeastward on Chart 1727

MALAYAN AND ENGLISH TERMS

Area

Coast prevailingly steep and abrupt, backed by high, forested mountains. Rocky cliffs at places. Numerous deep, V-shaped valleys. Narrow, discontinuous sandy beaches between headlands. Small coastal flats locally terraced Lolinda Bay. Irregular, hilly islands with steep shores encircle Lolinda Bay. Narrow fringing reefs at a few places, both on islands and on mainland. Numerous rocks offshore.

* * * * *

Area

Coastal lowland, extends inland along 2 rallays. Sandy beaches fringed with coconut palms. Beach ridges or dunes locally along shore. Large swampy and marshy areas on inland side. Bordered by moderate to steep-sided hills and mountains. Access to Djailolo Plain to south via valley corridor behind coastal mountains.

* * * * *

Area

Moderate to steep forested slopes rise from narrow beaches or shore bluffs to high volcanic cones.

* * * * *

Area Djailolo Plain

TOPOGRAPHY: Broad undulatory lowland branching around 2 sides of high, steep-sided mountain rising directly from shore. Continuous with valley of Lamo River, which crosses plain in meandering channel about 125 ft. wide. Stream banks of moderate height. High, flanking mountains rise steeply from plain. Fringing reefs on south.

GROUND CONDITIONS: Loam soil grades down into sand, silt, and clay, locally gravelly. Soils fairly well drained except in marshy and swampy areas near shores; give good footing and are easily excavated when dry. Beaches muddy and swampy on south, sandy on west.

VEGETATION: Coconut plantations extensive. Clearings and cultivated fields at many places. Large areas of second growth forest. Bamboo thickets along streams. Mangroves along south shore and other swamp vegetation inland.

REMARKS: Possible airfield sites. Access to interior via Lamo Valley.

* * * * *

M O L U K K A S E A

Area

Irregular mountainous coast. Slopes steeper at north than at south.

* * * * *

Area Dodinga Bay

TOPOGRAPHY: Coastal lowland bordered in many places by shallow coral reefs. In Dodinga Bay, scattered reefs in a few feet below low water level.

North side of bay commonly bordered by mangrove belt. Mangrove islands bordered by coral lie south and east of Sidangoli. Inland, ground rises gently to foot of mountains 1,000 to 1,500 feet in altitude. North of Sidangoli are broad rolling terraces 50 to 100 feet in altitude, backed by mountains.

Terraces and rounded hills, 100 to 700 feet in altitude, form Dodinga isthmus and restrict coastal plain to width of a few hundred feet or less.

South of isthmus, gently undulating plain 2 to 4 miles wide, locally interrupted by hills 150 to 500 feet high. Beach generally broad and flat; some low beach ridges. Steep mountains 1,000 to 2,000 feet high on inland margin.

Sidangoli, Oba, and Tosiko Rivers are only streams more than 125 feet wide. A few small streams east of Sidangoli disappear in coastal swamps.

GROUND CONDITIONS: Clay and clay loam predominate; coarser-textured, sandy clay loams at foot of mountains. On lowland, soil grades downward into sandy silt and clay. On Dodinga Isthmus, soil 15 to 30 feet deep; hard lava rocks or coral limestone exposed locally. Isthmus and higher parts of lowland are well drained. Forming good in dry weather; deep mud when wet. Mangrove swamps and other local areas are perennially wet. Beaches are rock, coral sand, or mud.

VEGETATION: Area largely covered by second growth forest and grassland; patches of rain forest and swamp forest common, especially south of the isthmus. Swamp forest and mangrove border most of area from Tasoleka village to isthmus; cover islands near Sidangoli. Coconut plantations near Sidangoli and south of Tosiko River.

REMARKS: No corridors into mountains of north and central Halmahera. Topography suitable for extensive movements; on north side of bay, trails are at mountain front back of swampy shore. Short roads over isthmus and through Sidangoli Village. Airfield site can be found on Sidangoli terraces.

* * * * *

Area Volcanic Islands

TOPOGRAPHY: Volcanic cones with steep sides, deeply ravined. Narrow coastal flats at some places; locally swampy or marshy. Elsewhere land rises with moderate to steep slopes directly from narrow beaches or coastal cliffs. Narrow, fringing reefs at a few places.

On Ternate, long narrow strip of coastal plain on east, shorter strip on south. Coastal slopes moderate on east and north, steeper on south, and steepest on west. Two small lakes at south and northwest.

GROUND CONDITIONS: Lava rock at or close to surface at many places; extends down to shore on northwestern Ternate. Soil at part is stony loam several feet deep; beaches gravelly; soils well drained and give good footing, but moisture makes excavation difficult at places.

VEGETATION: On lower slopes of larger islands, particularly on east, large areas of cultivated fields and orchards, interspersed with patches of second growth forest. Virgin forest on higher slopes, where sparse, brushy vegetation near tops of higher peaks.

REMARKS: Larger islands circled by trails, with some stretches of road; trails also up mountain sides.

* * * * *

Area Coast of west-central Halmahera

TOPOGRAPHY: **Narrow irregular coastal lowland, a few hundred feet to 2** miles wide; locally interrupted or interrupted by rocky headlands and steep-sided hills. Lowland is flat or gently undulating; many small marshes and swamps especially at river mouths. Beach ridges common. Coastal waters clear of reef except around Weda and nearby islands or at scattered points on mainland shore. Except Lamo River, streams are small and 100 feet wide. High rugged mountains rise 1,000 to 5,000 feet behind the lowland.

REMARKS: Interior very difficult of access. Native trails along coast.

* * * * *

Area Pajahi Plain

TOPOGRAPHY: Coastal lowland, irregular inland with broad irregular river basin; bordered by rugged mountains 1,000 to 3,000 feet high. Plain 6 to 9 miles wide; extends more than 8½ miles inland. Flat or gently undulating, generally less than 100 feet in altitude. Some low western area energine, interrupted by 8oft-foot hill at southwest corner. Coast low and marshy; extensive mashes and swamps along Kai River and its tributaries; remainder of plain fairly well-drained. Mouth of Kai more than 200 feet wide; a few other streams between 100 and 200 feet wide.

REMARKS: Short trails on east side of area; no routes across plain. Trail from Pajahi-islam follows best possible overland route to Weda Bay. Possible airfield sites on lower-drained parts of plain around Pajahislam.

* * * * *

Area Coast between Pajahi-islam and Togalaja

TOPOGRAPHY: Narrow strip of lowland a few hundred feet to ½ mile wide extends south mainly to Maidi village; backed by very steep mountains 1,000 to 1,500 feet high. Broad coastal plain around Maidi and Lifofa villages is surrounded by mountains. Flat or gently undulating surface largely covered by marsh; some sandy beaches of moderate width; low beach ridges locally. Tolal flats north of Lifofa village. Low-coast is interrupted by hills on south side of Maidi. Maidi River is only stream more than 100 feet wide.

REMARKS: Coastwise movement generally easy. Trail from Lifofa crosses narrowest point of mountain range to east coastal plain.

* * * * *

Area West coast of southern peninsula

TOPOGRAPHY: Narrow strip of lowland a few hundred feet to more than a mile wide; interrupted locally by steep-sided hills and ridges. Backed by very steep mountains 1,000 feet to more than 1,500 feet high. Many small streams; few are more than 100 feet wide. Narrow sandy or rocky beaches. Sidoli-lamo and Dowora-Lamo are rocky islands; slopes commonly rise directly from the sea. Other small islands off west coast are generally low and rolling and small; marshes common.

REMARKS: Coastwise trails between mainland villages; several poor cross-mountain trails.

* * * * *

Area Batjan Island Group

TOPOGRAPHY: Most of Batjan has rugged mountainous coast. Locally strips of lowland lie between mountain front and sea. Rolling plains form narrow isthmuses of Labeoka and Waijeu. Extensive swamps and marshes on Labeoka Isthmus and on coastal lowland of northwest Batjan. Tidal swamps in part bordered by beach ridges. A few streams more than 100 feet wide; numerous smaller streams.

Kasiruem, Mandioli and most other islands of group have rough mountainous coasts interrupted at only a few places by lowlands. Some small, low, and rounded islets.

REMARKS: Except for well-travelled isthmuses on Batjan, interior of islands are difficult of access. Airfield sites can be found on Batjan isthmuses, on Mandioli and Kaipo.

* * * * *

Area

Narrow strips and pockets of coastal flats alternate with hilly to mountainous coast and terraced coastal slopes. High, heavily forested mountains in hinterland. Many small streams. Coastline locally cliffed. Beaches generally narrow, but locally broad at low tide.

One larger strip of coastal plain on east side. Surface flat to undulatory. Abrupt rise to mountains on inner side. Sandy beaches. Possible airfield site.

Topography of North Loloda Islands similar to mainland, but relief lower and coastal flats virtually absent.

Narrow fringing coral reefs at scattered localities

* * * * *

Area Morotai

TOPOGRAPHY: Dissimilar coastal topography includes stretches of lowland, terraced slopes, hilly areas, and steep, mountainous slopes. Relief minimum at southwest end west. Numerous streams, many of moderate to large size, and some navigable by small boats. Large coastal plain at southwest corner, and smaller ones on vicinity of Wajabeeli as west. Surface flat to undulatory. Gradual rise on inland side at both places.

Small islands off southwest coast are low, with flat to rolling surfaces. Larger island of Rao is hilly with low to moderate slopes at shore; slopes steeper at higher elevations.

Fringing coral reefs at places along shores of main island and around some of smaller islands.

GROUND CONDITIONS: Sandy loam to clay soils, grading down into sand, silt, and clay locally gravelly, or lying on coral rock at depths of a few feet to several feet. Soil drainage fair to good, except in local marshy patches. Good footing when dry; moderately muddy when wet.

VEGETATION: Tropical rain forest, with some coconut palms along shore; bamboo along streams; local clearing and second growth forest around settlements.

REMARKS: Possible airfield sites near Wajabeeli and on coastal plain at southwest.

* * * * *

Area Galela Plain

TOPOGRAPHY: Broad lowland surrounded by high, rugged mountains. Lakes near center bordered by 2 small, steep-sided volcanic cones; conspicuous landmarks. Flat to undulatory surface at north; low, rolling hills at south. Abrupt rise to bordering mountains at north, more gradual rise at south. Crossed by winding channel of Taibo River, about 50 yds. wide. Low, rounded beach ridges up to about 10 ft. high along shore north of Galela; low sea cliffs along shore south of Galela.

GROUND CONDITIONS: Sandy loam to clay soil grading down into sand, silt, and clay, locally gravelly, on lowland surface. Fair to good drainage except in large swamps near shore north of Galela. Good footing except during and immediately after rain. Volcanic cinders near ground surface on conical hills, and lava rock at or near surface locally south of Galela. Sandy beaches north of Galela, rocky shore south of Galela.

VEGETATION: Large areas of grassland on inland side. Clearings, cultivated fields, patches of second growth forest, virgin forest, and swampy vegetation in rest of area.

REMARKS: Jap airfield north of Galela. Other possible airfield sites. Narrow valley corridor extends to west coast. Shore road south to Tobelo.

* * * * *

Area

Narrow terrace at foot of steep volcanic cone with sides grooved by numerous ravines. Terrace bordered by low sea cliff. Rocks along shore. Coconut palms and other forest vegetation. Road on inner side of terrace reported recently blocked by lava flow.

* * * * *

Area Tobelo Plain

TOPOGRAPHY: Flat to undulatory lowland strip averaging about 1.5 miles wide. Gradual rise to high mountains on inner side. Crossed by a few small streams.

Several low-lying islands up to more than 2 miles long a few miles offshore. Fringing coral reefs at places along island and mainland shores.

GROUND CONDITIONS: **Loam soil, sandy near shore, grading down into sand, silt, and clay,** locally gravelly. Good drainage except in local marshy tracts. Good footing except during and immediately after rain. Beaches sandy.

VEGETATION: Coconut palms both on islands and on mainland; partly in plantations. Some grassland at north. Bamboo along streams. Virgin forest and second growth forest in rest of area.

REMARKS: Jap airfield on Mitil Island. Other possible airfield sites. Road at north continuous with horse trail at south; follows shore.

* * * * *

Area

Broad terrace flats and gentle slopes extending several miles inland; sea cliffs and bluffs 150 to 300 ft. high. Steep ground near shore. Beaches narrow or absent. Terrace edge cut by irregularly spaced, narrow, V-shaped valleys.

* * * * *

Area

Undulatory sloping plains and rolling hills leading gradually up from shore to heights overlooking Knoe Valley. Widely-spaced valleys of moderate size cut below general level. One low-lying island about a mile offshore. Narrow sandy beaches. Possible airfield sites.

* * * * *

Area Kaoe Bay

TOPOGRAPHY: Coastal lowlands, diverse in size and shape, alternate with stretches of hilly to mountainous coast and terraced coastal slopes. Lowlands bordered by mountains. Moderate to large streams enter bay on all sides.

Principal lowland is at mouth of Kaoe River, one of largest streams of island; continuous with broad interior basin. Bordered by low, rolling hills on east and higher, steeper hills on west. Sand bars at river mouth. River channel about 80 ft. wide. Batiia low.

Beaches narrow or absent where shore is steep; locally broad along lowlands. Narrow fringing coral reefs at a few places.

GROUND CONDITIONS: Sandy loam to clay soil, grading down into sand, silt, and clay locally gravelly, on lowlands. Large areas of swampy and marshy ground along and in from lowland shores; elsewhere not too wet; is easily excavated.

Along steeper stretches of coast, soils grade down into bedrock at depth of several feet; well drained; fooing good.

Beaches sandy to muddy along lowlands, sandy to rocky elsewhere.

VEGETATION: Coconut palms along shore at many places. Some grassland on Kaoe Plain. Clearings and second growth forest near settlements. Mangroves and other swampy vegetation along and on some lowland areas. Virgin tropical forest elsewhere.

REMARKS: Jap airfield near Kaoe; another airfield reported across bay at Wasile. Kaoe Valley provides access to interior; lower course of Kaoe River navigable by small boats. Isthmus corridor from west end of bay leads to west coast. From south shore of bay a direct overland route extends to head of Weda Bay.

* * * * *

H A L M A H E R A

S E A

Area Wasile Bay

TOPOGRAPHY: Broad, flat to undulatory lowlands at east and north, separated by stretch of terraced shore. At south, shore terraced to hilly. Several moderate size streams. Abrupt rise to mountains east of main coastal plain; more gradual rise from plain at north. Narrow fringing reef at north.

GROUND CONDITIONS: Loam soil grading down into gravel, sand, silt, and clay, and at north locally-underlain by coral rock. Soil fairly well-drained, gives good footing, is easily excavated; muddy when wet. Beaches sandy.

VEGETATION: Coconut palms along shore, bamboo along streams, and virgin tropical forest on rest of area except for local clearings and second growth forest tracts near settlements.

REMARKS: Several possible airfield sites. Difficult mountain trail gives access to north shore of Buoli Bay.

* * * * *

Area

Terraced coast rising gradually toward interior mountains. Narrow sandy beaches. Moderate to steep shore slopes, locally rocky. Widely spaced streams of moderate size. Fringing coral reef at northeastern tip. One narrow lowland strip with possible airfield site.

* * * * *

Area

Broad, flat to undulatory lowland. Steep, abrupt rise to high mountains at west; less abrupt rise to more distant mountains at south and to high hills at north. One isolated hill at south shore. Crossed by a few large streams and a few minor streams. Beach ridges locally. Narrow fringing coral reefs at a few places.

Several possible airfield sites. No easy access to other parts of peninsula.

* * * * *

Area

Hilly coast with moderate to steep slopes rising from sea or narrow discontinuous beaches. A few streams of moderate size and many small streams.

* * * * *

Area Buoli Bay

TOPOGRAPHY: Coastal lowlands fronted by sandy beach; separated by rough steep-sided ridges and prominent rocky headlands. High rugged mountains rise from inland margins. Most extensive lowland is on south shore. Narrow east half is flat and swampy except for beach ridges and local coastal terraces. West half includes broad valley flats of lower Nau River; flat or gently undulating and fairly well-drained. Lowlands on northwest and north sides of Bay are 10 to 11 miles long, 1 to 3 miles wide. Plains slope gently seaward from mountain front; fairly well-drained. Many small reefs in Buoli Bay, some dry at low tide. Steep rugged islands off the rocky headland near Buoli Sensei.

REMARKS: Short stretches of trail along parts of coast. Mountainous interior inaccessible except by a few difficult foot paths.

* * * * *

Area Southeast arm from Bitjoli village to Cape Ngnolopopo

TOPOGRAPHY: Narrow discontinuous lowlands and low rocky terraces interrupted locally by rugged headlands. Large area of marsh on lowland of Tg. Ingegiang. Hinterland of high terraces and steep-sided mountains. Coast bordered at several points by reefs. Several coral islands off-shore. Moore and Sarli are hilly in part; locally more than 280 feet high. Others low, rounded, less than 100 feet in altitude.

REMARKS: Mountainous interior, inaccessible. A few short coastwise trails. Shore road on Jaggelang Island.

* * * * *

Area South Coast of Southeast Peninsula

TOPOGRAPHY: Rugged mountainous coast. In a few places, narrow strips of lowland lie between the steep mountain front and the sea. Small swamps common at river mouths. A few streams are more than 150 feet wide in lower reaches; numerous smaller streams.

REMARKS: Mountainous interior inaccessible except for a few difficult trails. A few short coast-wise trails.

* * * * *

Area Lalifal in Soswomo

TOPOGRAPHY: Flat or gently undulating plain of Kobe River and its tributaries extends 8 to 10 miles inland from Weda Bay. Width 4 to 6 miles. Valley has low marginal hills and terrace bordered by high mountains. River plain locally swampy. Largest swamp is at mouth of Kobe river, which is more than 400 feet wide in its lower reaches. Low beach ridges along the shore.

Along coast south of Kobe plain, narrow irregular lowlands alternate with low hills and coral limestone terraces. Except broad valley of middle and upper Fali River, hinterland is rough and mountainous. Reefs along parts of coast. A few small coral islets off-shore and submerged reefs off-shore from mouth of Fali.

REMARKS: Some short coastal trails. Trails leading north through Kobe valley follow most direct overland routes to western side of Kobe Bay. Airfield sites can be found in terrace-drained areas on east side of lower Kobe Valley.

* * * * *

Area East coast of southern peninsula

TOPOGRAPHY: Flat or gently rolling coastal plain of irregular width extends without interruption from the village of Soswomo to the southern tip; merges westward with broad valley flats lying between long-finger-like ridges. Plain interrupted locally by isolated hills 500 to 800 feet high. Coast generally low and sandy; locally low beach ridges border the plain. Many streams more than 100 feet wide in their lower courses; some more than 200 feet. Only large areas of marsh and swamp lie between Fiju and Boli rivers in north part of the plain.

REMARKS: Good coastwise foot trail. No easy routes to west coast, several poor trails cross mountains. Airfield sites can be found at many places on the plain.

* * * * *

Area Tip of southern peninsula

TOPOGRAPHY: Sandy lowlands and raised coral reefs border irregular hills, ridges, and terraces 150 to 600 feet in altitude. Some low marshy areas around Gotot Bay. Forest cover somewhat thinner with trees smaller and further apart than on other lowlands; underbrush thicker.

REMARKS: Topography locally suitable for airfield sites.

* * * * *

Area Dumar and Djoronga Islands

TOPOGRAPHY: Broad flat coastal plains with small groups of rounded hills inland. Coast generally bordered by broad coral reefs. Mangrove swamps fairly common. Smaller islands of the group are mostly flat coral islets; Wraka is an atoll.

REMARKS: No trails or roads. Forest and swamp are serious barriers to movements inland.

* * * * *

C E R A M S E A

O B I S T R A I T

M O R O T A I S T R A I T

M A K E S T R A I T

W E D A B A Y

D J A I L O L O P A S S A G E

H A L M A H E R A S E A

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TERRAIN DIAGRAM — HALMAHERA (MOLUKKAS)

VEGETATION

Dense tropical rain forest or swamp forest covers most of the islands. Around settlements and on the larger plains are clearings, gardens, and thick brushy second growth. The virgin rain forest is a mixed stand of hardwood and softwood trees intergrown with a tangle of vines and other plants. Tree trunks are tall and straight, broad at base with buttressed roots; crowns form a continuous overhead canopy. Undergrowth is most dense along streams, in coastal lowlands, and near forest borders. Along streams dense bamboo tickets are common. On higher mountain ridges and drier terrace land along the coast, the forest thins, with trees becoming smaller and farther apart but the underbrush is more dense. Grass (alang-alang) plains are rare but may occur on coastal terraces. Thick stands of Sago palm and cane-like vegetation occur in swamps above tide water level. Near the coast in brackish water grown nipa palms with thick fronds, no trunks, and sharp spikes hidden in the muck. Many tidal swamps have mangrove forests with tangles of prop roots. Coconut palms with little undergrowth border the sandier strips of shore.

GROUND CONDITIONS

Soil is generally deep and clayey throughout the mountain areas. On volcanic peaks and on some of the steeper ridges, however, the ground is rocky, and cliffs and ledges are numerous. Most of the underlying rock is conglomerate, hard lava rock, or limestone. In the lowland areas, the soil is clayey or sandy, in places gravelly. On terraces along the coast, it is fairly thin and clayey with hard coral limestone locally at or near the surface. Most soils are well drained and provide good footing when dry but all become muddy and slippery during and after rains. There are large tracts of swamp and marshland on many areas of coastal lowland especially along the larger rivers. In dry seasons the marshland may become fairly firm and passable but travel is slow. Beaches commonly have mantle of rock fragments or coarse coral sand. Small low islets off Halmahera are coral rock overlain by sand or patches of clay soil.

GENERAL DESCRIPTION

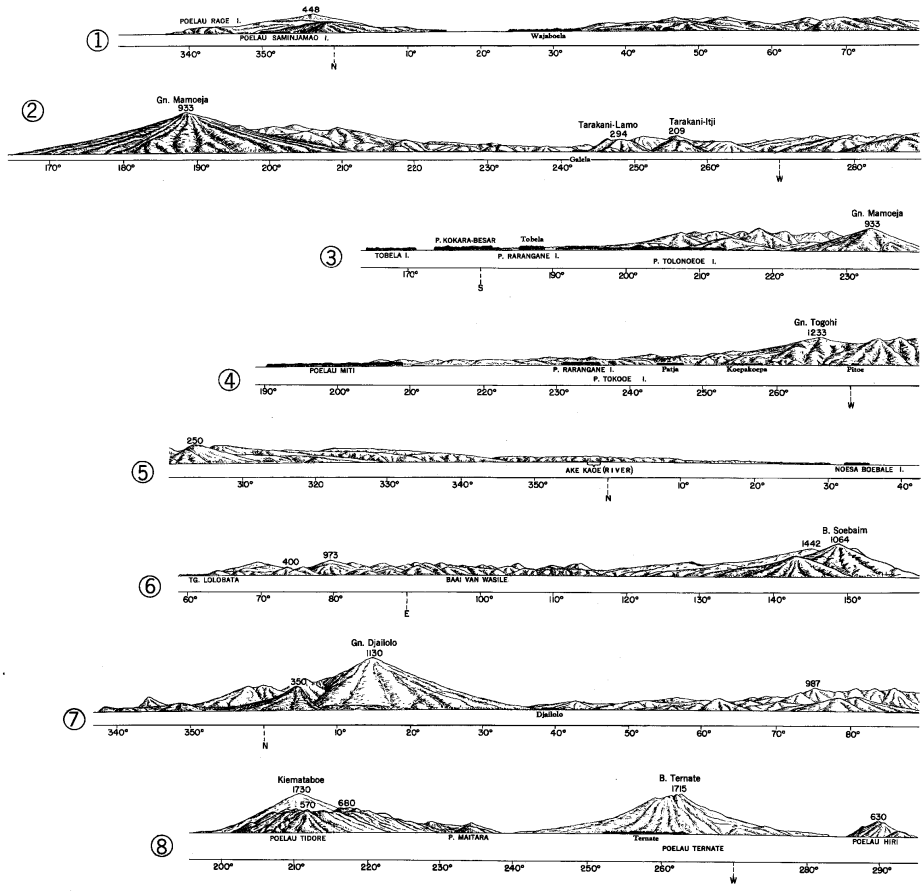
TOPOGRAPHY

The 3 types of terrain characteristic of the coastal regions of Halmahera are described below. The principal coastal lowlands and larger swampy areas are shown on the map; mountains and higher terraces have not been differentiated.

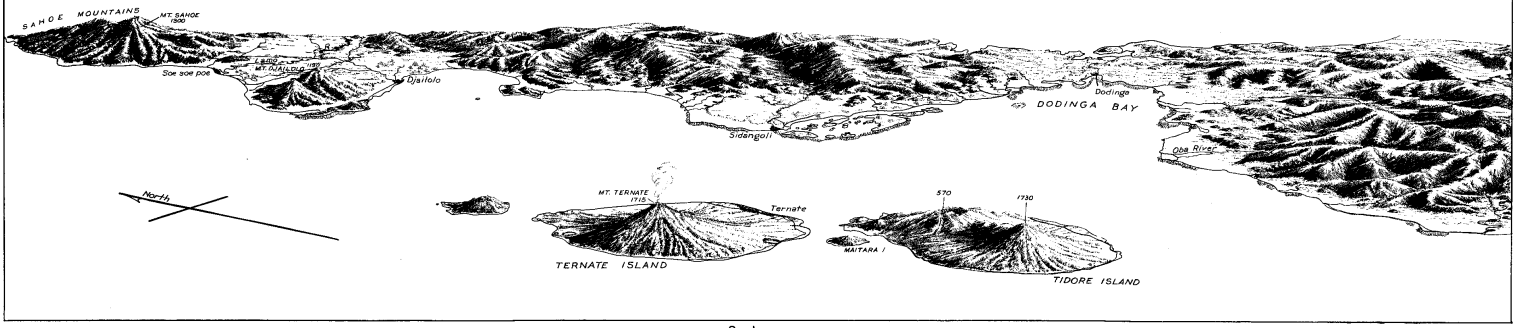
COASTAL LOWLANDS: Flat to undulating alluvial plains crossed by a few fairly large rivers; numerous and extensive along the east coast and on Morotai, less so along the west coast and on the Batjan Islands.

LOW COASTAL TERRACES AND HILLS: Low rough-surfaced or rolling terraces and broad rounded hills a few hundred feet high; occupy large areas only on the east side of Halmahera and on certain islands in the Batjan group.

MOUNTAINS: On Morotai, Batjan, and most of Halmahera, mountains, which along the coast end in high cliffs or steep rugged slopes broken by numerous sharp ridges and steep narrow valleys. Makian, Moti, Tidcre, and Ternate Islands off the west coast of Halmahera are part of a chain of volcanoes that extends diagonally across the northern peninsula of Halmahera. The mountain ranges sharply delimit most of the lowland areas and, with few exceptions, are unbroken by natural corridors which would permit easy access into the interior of the island.

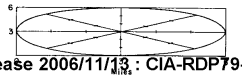


TERRAIN DIAGRAM — ISTHMUS OF DODINGA — HALMAHERA (MOLUKKAS)



Orthographic projection made mechanically from A.M.S. Netherland Indies maps 1:100,000 and from A.M.S. T761 maps 1:20,000 reduced to 1:100,000 with additional data sketched from photographs. Altitudes in meters above sea level. Vertical angle of view 13 degrees. Vertical scale not exaggerated. The scale is a similar orthographic projection of a square and an inscribed circle 6 miles in diameter. Distances on the diagram between points of equal altitude can be scaled along the diameter parallel to the line between the two points.

Scale



PREPARED BY U. S. GEOLOGICAL SURVEY FOR CHIEF OF ENGINEERS, U. S. ARMY

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Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

MOLUKKEN ISLANDS, 1:300,000
HALMAHERA

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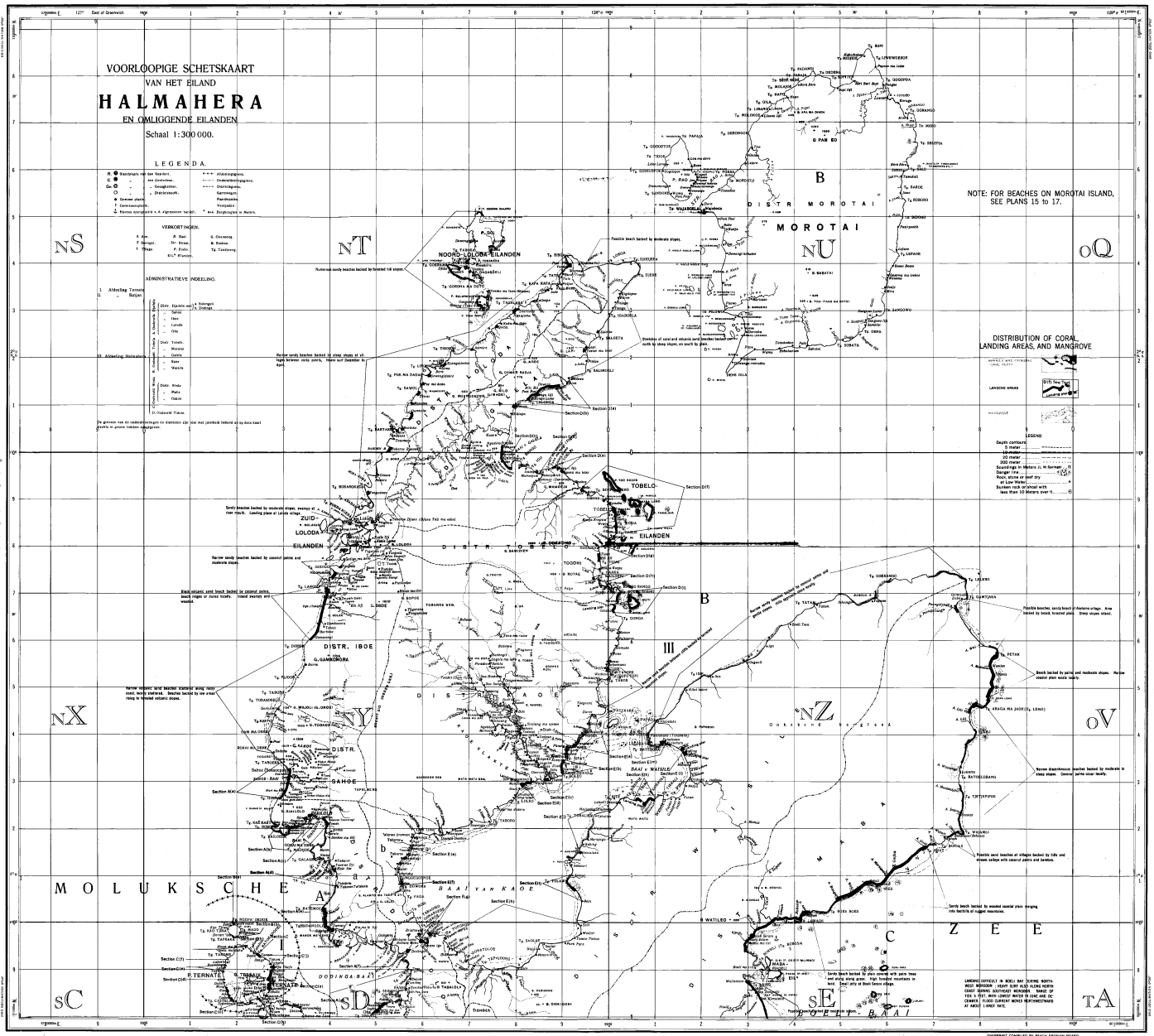
HALMAHERA

FIRST EDITION - AMS 1

PLAN NO. 5
JANIS 155
SHEET NO. 1



AMS 7401.
First Edition 1943

Prepared under the direction of the Chief of Engineers, U. S. Army, 1943. Based from a Dutch Map dated 1938.
HYDROGRAPHY FROM NETHERLANDS HYDRO. CHARTS 364,367 & 381

Scale 1:300,000

NETHERLANDS EAST INDIES EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin:	3,300,000 meters East 900,000 meters North
Scale Factor:	.997

ADMINISTRATIVE UNITS

Afdeeling is equivalent to state or province. Onderafdeeling is next sub-division; next is the district.

The boundary lines of the Onderafdelings and Districts are not very accurate.

ABBREVIATIONS

R. — River, Stream	P — Island
K — River	G — Mountain
M — Lake	B — Mt. Hill
B — Bay	Tg — Cape
Sr — Strait	Eil — Islands

LEGEND

Seat of Resident	Boundary of Afdeeling
Seat of Controller	Boundary of Sub-Afdeeling
Seat of Administrator	Boundary of District
Seat of District Chief	Carriage Road
Inhabited Place	Bridle Path
Garrison	Footpath
Harbor Open for Trade	Elevation in Meters

MOLUKKEN ISLANDS, HALMAHERA
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MOLUKKEN ISLANDS, 1:300,000
HALMAHERA

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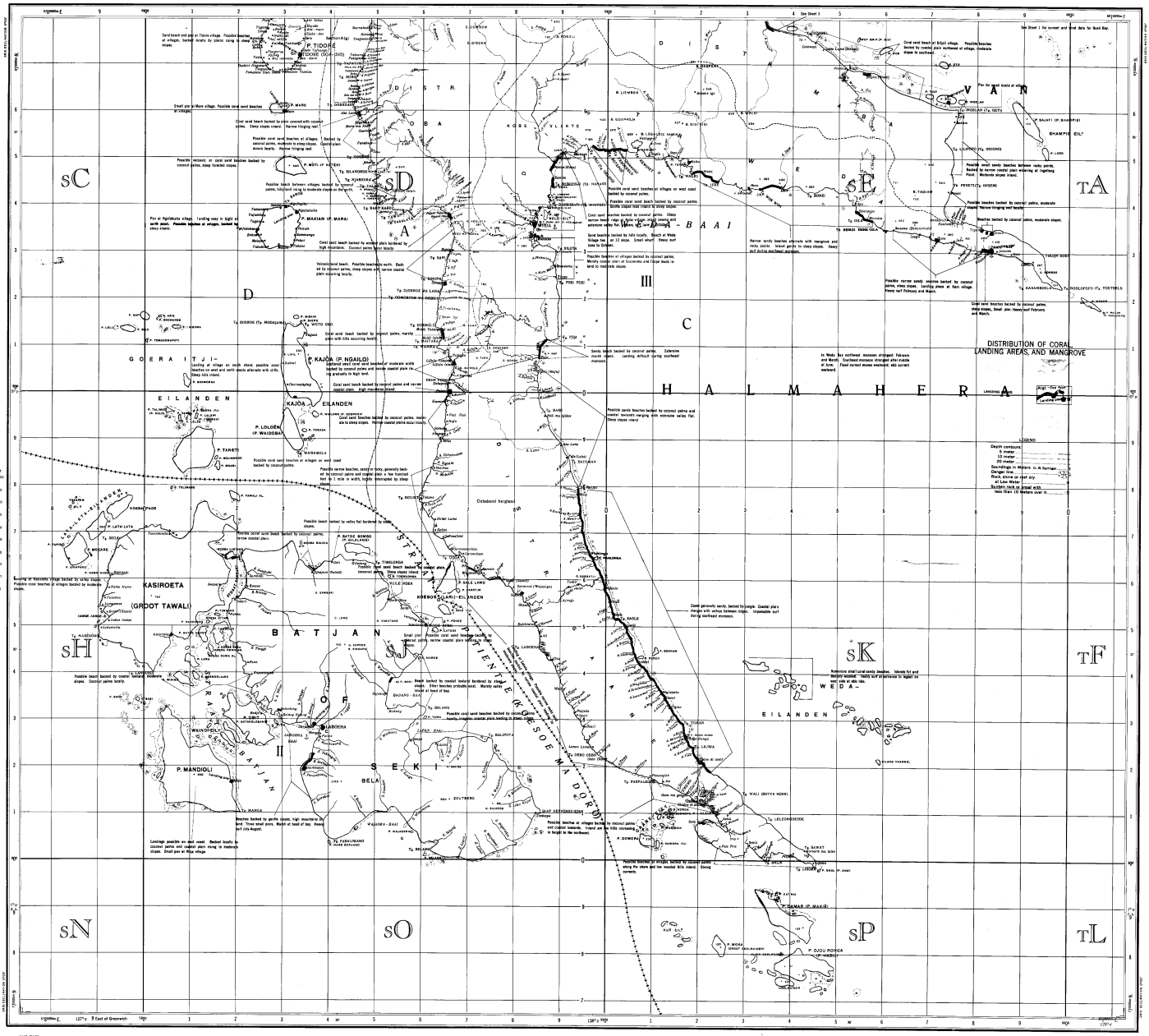
HALMAHERA

FIRST EDITION-AMS 1

PLAN NO.6
JANIS 155
SHEET NO. 2



AMS 7461.
First Edition 1943.
Prepared under the direction of the Chief of Engineers, U.S. Army, 1943. Copied from a Dutch May detail 1938.
HYDROGRAPHY FROM NETHERLANDS HYDRO. CHARTS 260, 265, 280 & 444

APPROXIMATE MEAN DECLINATION 1943 FOR CENTER OF SHEET
ANNUAL MAGNETIC CHANGE 1° WESTWARD
DO NOT USE MAGNETIC COMPASS TO OBTAIN NUMERICAL VALUES OF BEARINGS

BEARINGS		LINE	
True from True	Magnetic from Magnetic	True from True	Magnetic from Magnetic
To convert bearings from true to magnetic, subtract the declination for the year and the annual change multiplied by the number of years from the date of the chart.	To convert bearings from magnetic to true, add the declination for the year and the annual change multiplied by the number of years from the date of the chart.	To convert bearings from true to magnetic, subtract the declination for the year and the annual change multiplied by the number of years from the date of the chart.	To convert bearings from magnetic to true, add the declination for the year and the annual change multiplied by the number of years from the date of the chart.
Example			
Date of chart 1938	Date of chart 1938	Date of chart 1938	Date of chart 1938
Declination ..... 1° E	Declination ..... 1° E	Declination ..... 1° E	Declination ..... 1° E
Annual change ..... 1° W	Annual change ..... 1° W	Annual change ..... 1° W	Annual change ..... 1° W
Number of years 5	Number of years 5	Number of years 5	Number of years 5
Total change ..... 5° W	Total change ..... 5° W	Total change ..... 5° W	Total change ..... 5° W
Bearing ..... 90°	Bearing ..... 90°	Bearing ..... 90°	Bearing ..... 90°
Correction ..... 4° W	Correction ..... 4° W	Correction ..... 4° W	Correction ..... 4° W
Magnetic bearing ..... 94°	True bearing ..... 86°	Magnetic bearing ..... 94°	True bearing ..... 86°

Scale 1:300,000
10 0 5 0 10 20 30 Miles
10 0 10 20 30 40 Kilometers

NETHERLANDS EAST INDIES EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin:	3,000,000 meters East 900,000 meters North
Scale Factor:	.997

DIAGRAM COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 1943 M 6-43

ADMINISTRATIVE UNITS

Alberring is equivalent to state or province. Onderafdeeling is next sub-division next to the district.

The boundary lines of the Onderafdelings and Districts are not very accurate.

ABBREVIATIONS

a — River, Stream	P — Island
d — River	G — Mountain
T — Lake	B — Mt. Hill
B — Bay	Tg — Cape
Bn — Strait	Eln — Islands

LEGEND

Seat of Resident	⊕R.	Boundary of Afdeeling	
Seat of Controleur	●C.	Boundary of Sub-Afdeeling	
Seat of Administrator	⊙Adm.	Boundary of District	
Inhabited Place	○	Carriage Road	
Seat of District Chief	●	Bridle Path	
Sanitarium	†	Footpath	
Harbor Open for Trade	⚓	Elevation in Meters	100

MOLUKKEN ISLANDS, HALMAHERA
N043-E12653/3S5x209

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MOLUCCAN ISLANDS 1:125,000

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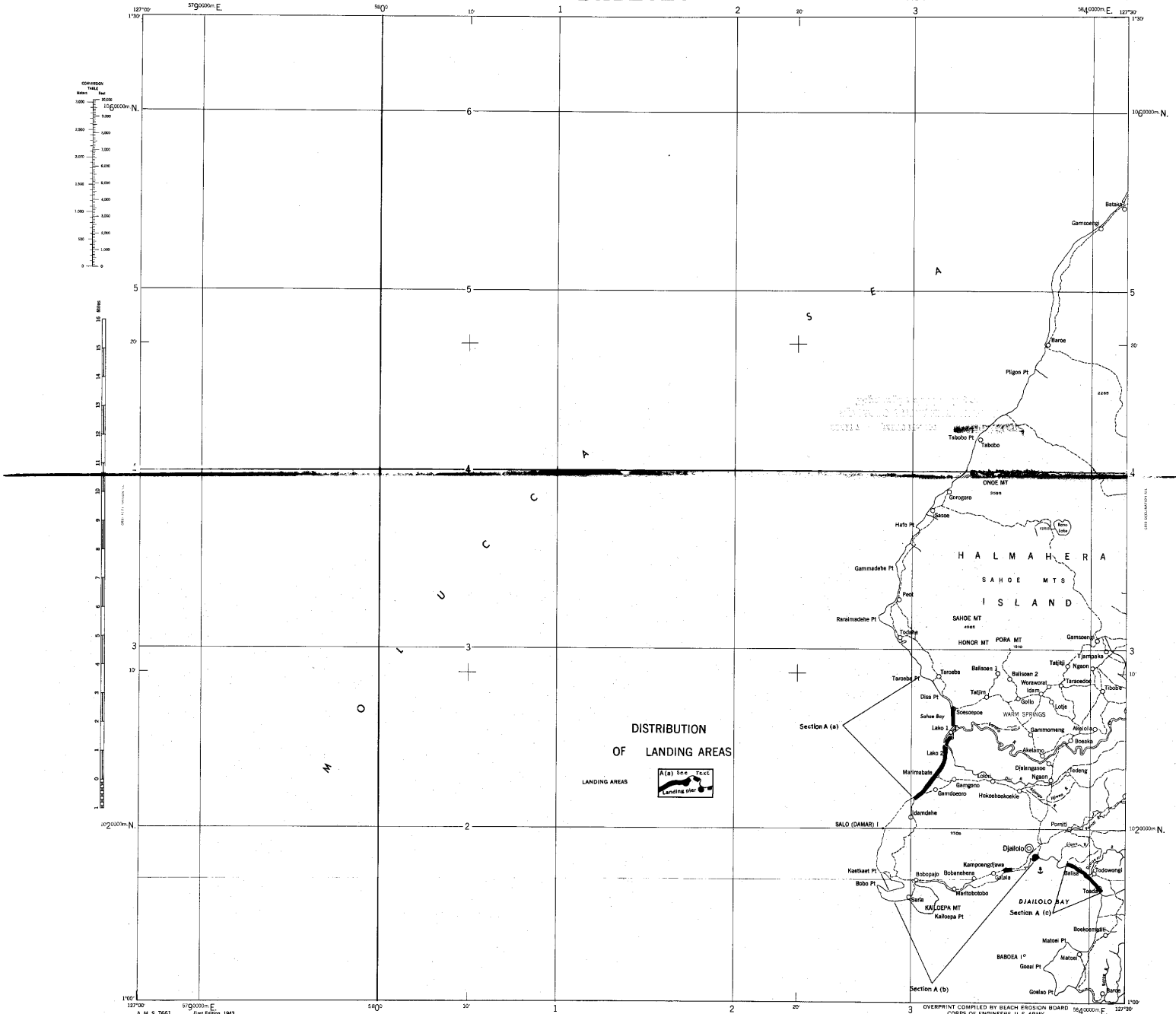
DJAILOLO

FIRST EDITION-AMS 1

PLAN NO.7
JANIS 155
SHEET No. 6



CONVERSION TABLE
Metres Feet

Miles

Kilometres

HEIGHTS IN FEET

A. M. S. T661 First Edition. 1943
Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service, Indianapolis unit, 1943.
Work Projects Administration Project, O. P. 165-2-00-3.
Compiled from Netherlands Topographic Service Maps of Moluccan Islands, (Res. Ternate), 1:100,000 (1925, 1926).

ROAD CLASSIFICATION

- Primary Highways
- Secondary Highways
- Improved Roads
- Unimproved Roads
- Trail and Cart Tracks

INCIDENCE OF GRID LETTERS AND INDEX TO ADJOINING SHEETS

SCALE 1:125,000

Miles
Kilometers
Yards

CONTOUR INTERVAL 100 FEET

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator & 110° East
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North
Scale Factor	.997

NOTE: GRID LINES ON THIS MAP WILL HAVE MINOR CORRECTIONS AND ADDITIONS WHICH CAME TO OUR ATTENTION AND WILL APPEAR ON THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

APPROXIMATE MEAN DECLINATION 1942 ANNUAL MAGNETIC CHANGE 7' INCREASE FOR CENTER OF SHEET

OVERPRINT COMPILED BY BEACH EROSION BOARD CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. 164465 SAS 44

TO GIVE A GRID REFERENCE ON THIS SHEET

LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz.:102000N
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP. 102000

POINT	FEET	LETTERS
	East	North
Take West edge of square in which point lies, or read the figure printed opposite this line on North or South margin or on the line itself as the face of the map. Estimate tenths Centaines	2	Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself as the face of the map. Estimate tenths Hundreds	3
	9		3
	East 29	North 33
REFERENCE	Y 2933	To nearest 1,000 metres
Unit: Metric / Imperial (1,000 Metres / 500 Fms.)		
Nearest similar reference with one letter distant		

No. 6 DJAILOLO
N100-E12700/30

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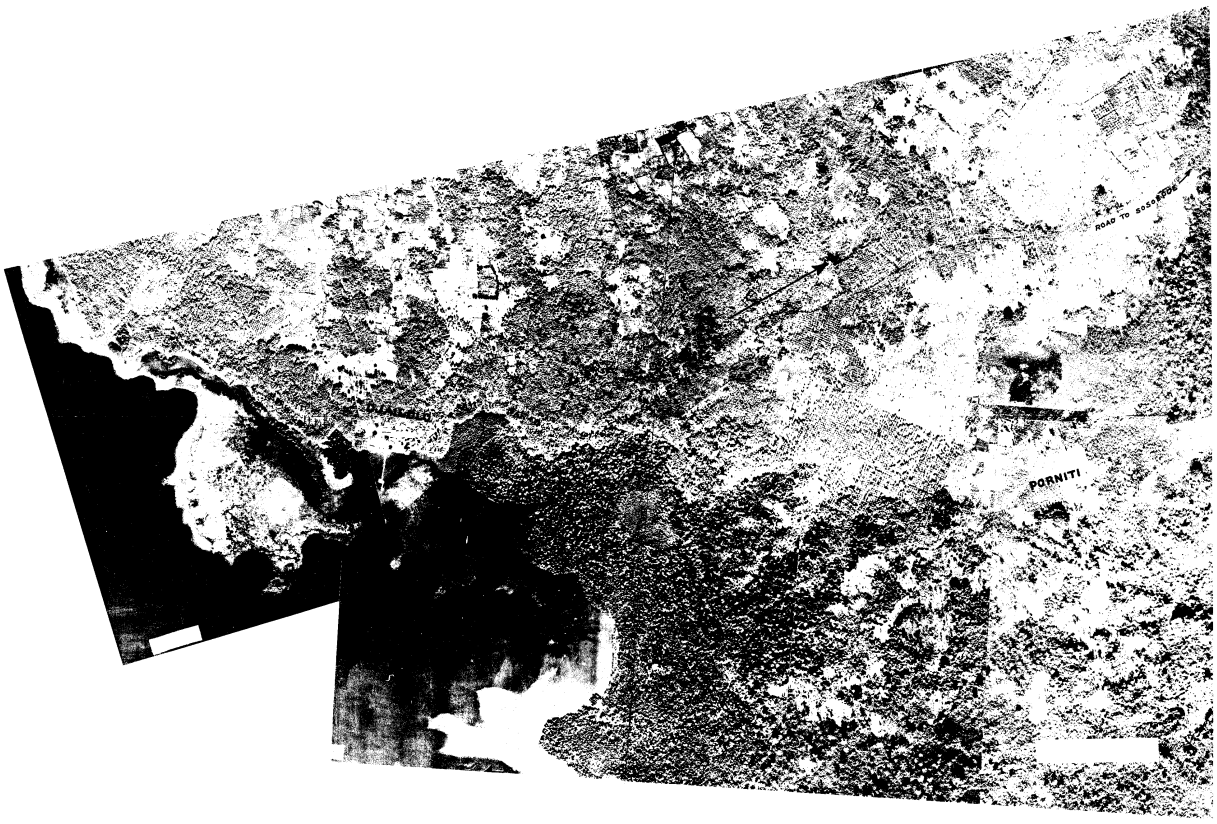
Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PLAN NO.8
JANIS 155



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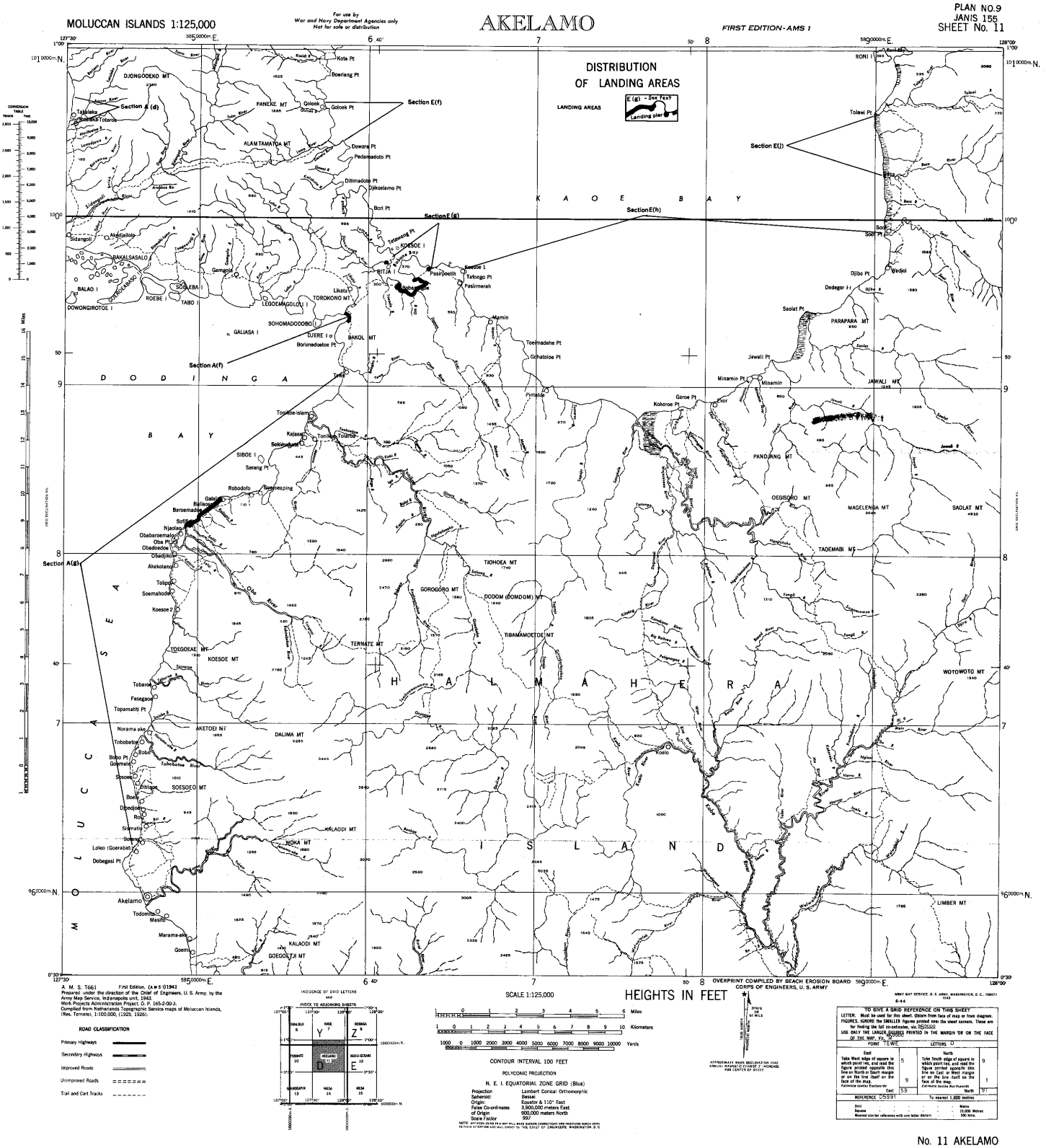

A. M. S. T661 First Edition. (A ▪ S ▪) 1943
Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service, Indianapolis unit, 1943.
Work Projects Administration Project. O. P. 165-2-00-3.
Compiled from Netherlands Topographic Service maps of Moluccan Islands, (Res. Ternate), 1:100,000, (1925, 1926).

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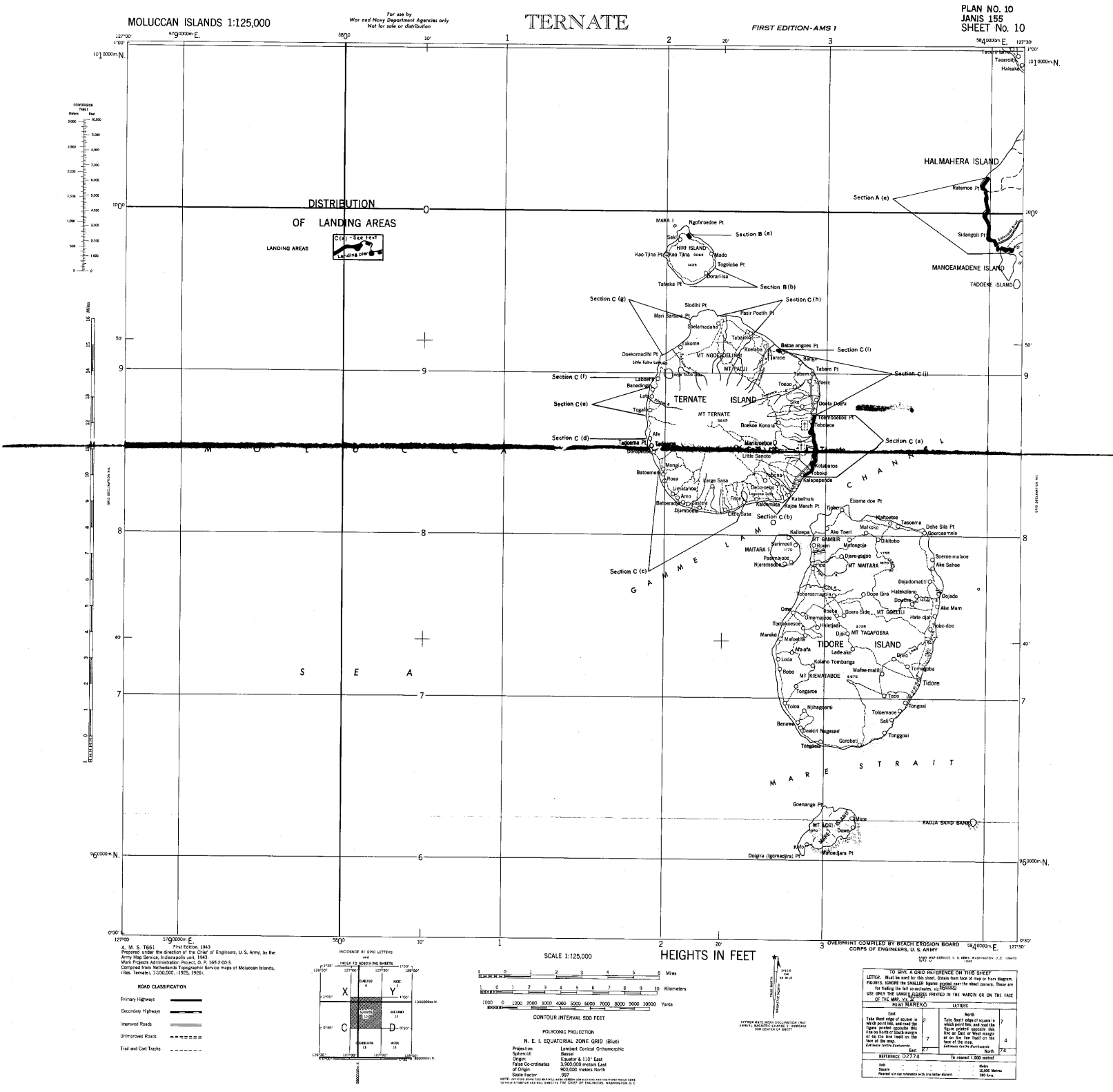

A. M. S. T661 First Edition, 1943
Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service, Indianapolis unit, 1941
Work Projects Administration Project, O. P. 165-2-00-3.
Compiled from Netherlands Topographic Service maps of Moluccan Islands, Ilas. Ternate), 1:100,000, (1925, 1926).

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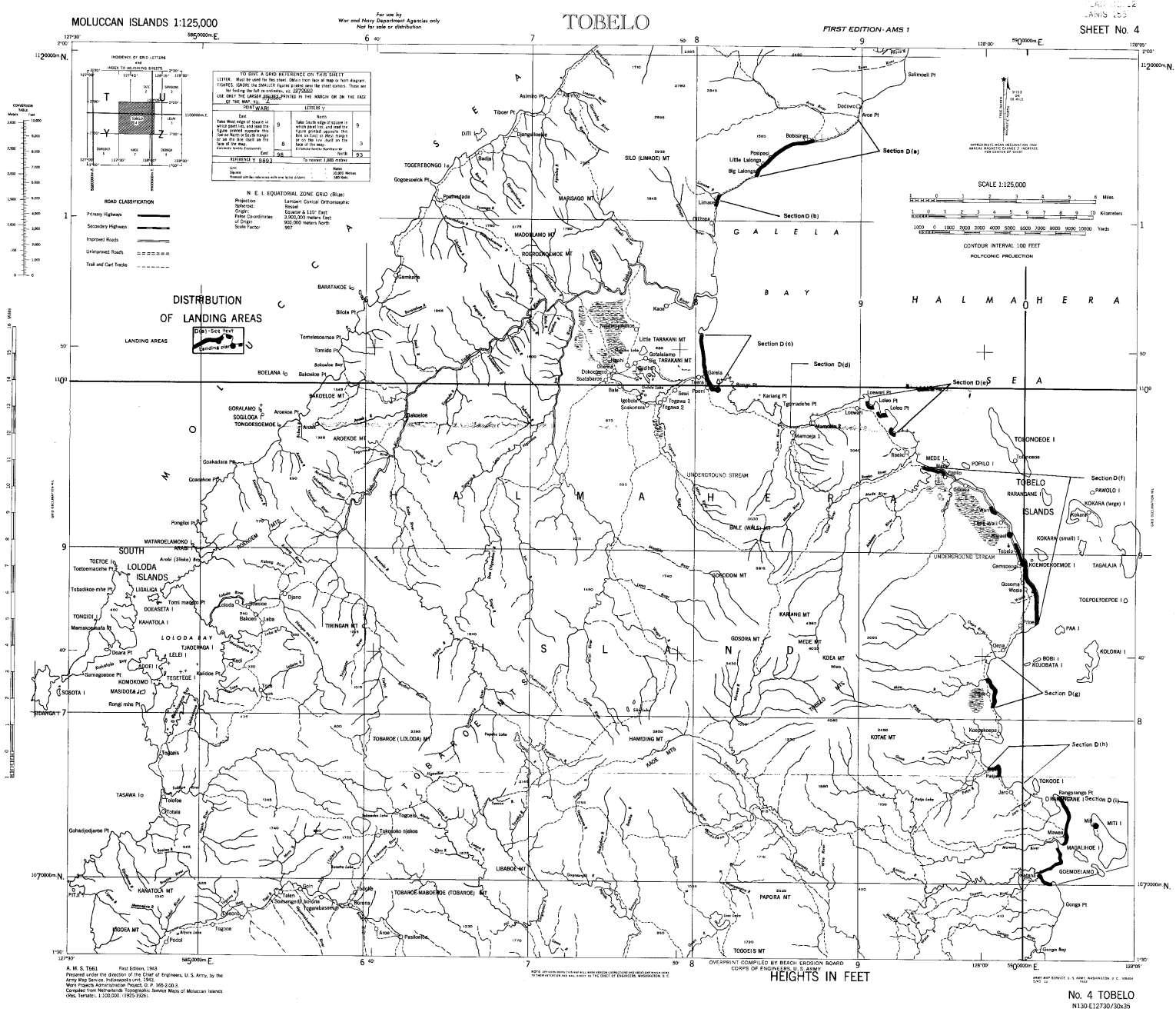

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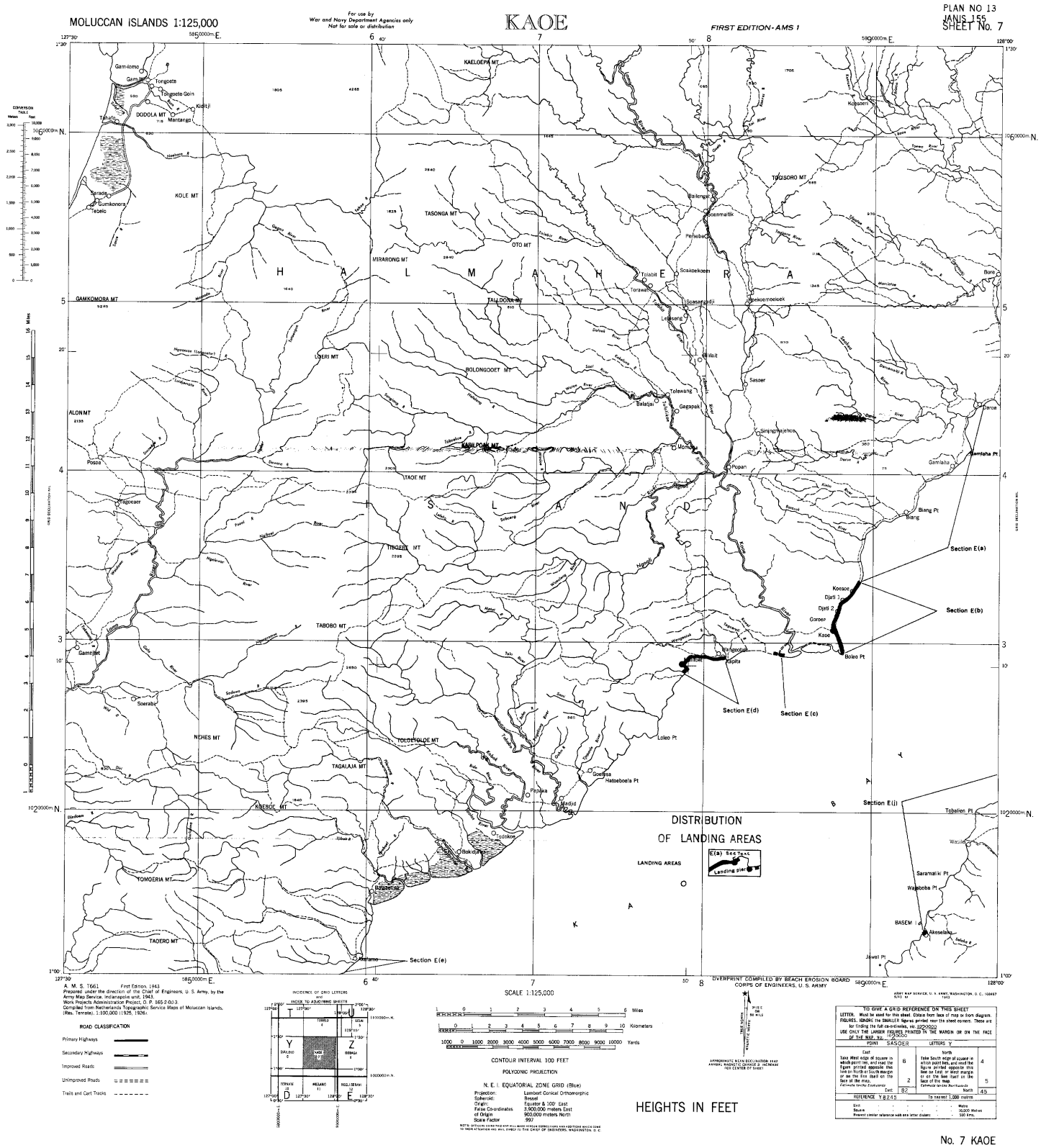

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MOLUCCAN ISLANDS 1:125,000

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DODAGA

FIRST EDITION - AMS 1

PLAN NO.14
JANIS 155
SHEET No. 8

DISTRIBUTION OF LANDING AREAS

LANDING AREAS

E (m) Sea Text
Landing place

HALMAHERA SEA

ISLAND

WASILE BAY

Domake Pt
Orano Pt
Sawai Point
Doelo Bay
Toenoeo Pt
Najabailo Point
Bore
Nojam Point
Doro
Ratjikara Pt
BOEBALE I
Boebale
Njaoleko Pt
Toeboe
Hatetabako Pt
Hatetabako
Lolobata (Tatabako)
Lolobata Pt
Section E (m)
Section E (l)
Section E (k)
Section E (j)
Dodaga Pt
Dodaga
Goesoea Pt
Goesoea
Goesoengigakoe Pt
Tjekali Pt
Soebaim
Seboerre Pt
Bili Pt
Tobaan
Fagoeloh
Toetoea Pt
Ilis Pt
Ilis Bay
Lolobobi Bay
Labilabi
Bowli Bay
TATAM MT
MOLIORAT MT
IGAM MT
TITILEGAN MT
POPOEDO MT
ISALEI MT
SOEBAIM MT
WATOWATO MT

HEIGHTS IN FEET

SCALE 1:125,000

CONTOUR INTERVAL 100 FEET

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator & 110° East
False Co-ordinates of Origin	3,902,000 meters East 900,000 meters North
Scale Factor	.997

NOTE. EFFECTIVE CONSTANT AMP WILL HAVE NO REGULAR CORRECTION AND ADDITIONS WHICH COME TO THEIR ATTENTION AND WILL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D.C.

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS

OVERPRINT COMPILED BY BEACH EROSION BOARD CORPS OF ENGINEERS, U.S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. 10MAR. 5443 Gs 1943

A. M. S. T661
1st Edition, 1943.
Prepared under the direction of the Chief of Engineers, U.S. Army, by the Army Map Service, Indianapolis unit, 1643.
Work Projects Administration Project, O. P. 165-2-00-3.
Compiled from Netherlands Topographic Service maps of Moluccan Islands, (Res. Temalie), 1:100,000, (1925, 1926).

ROAD CLASSIFICATION

- Primary Highways
- Secondary Highways
- Improved Roads
- Unimproved Roads
- Trail and Cart Tracks

TO GIVE A GRID REFERENCE ON THIS SHEET

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FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz. 1920000
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz 102000

POINT LABILABI — LETTERS Z

East		North	
Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map. Estimate tenths Eastwards	3 7	Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map. Estimate tenths Northwards	6 2
East	37	North	62

REFERENCE Z3762 — To several 1,800 eastings

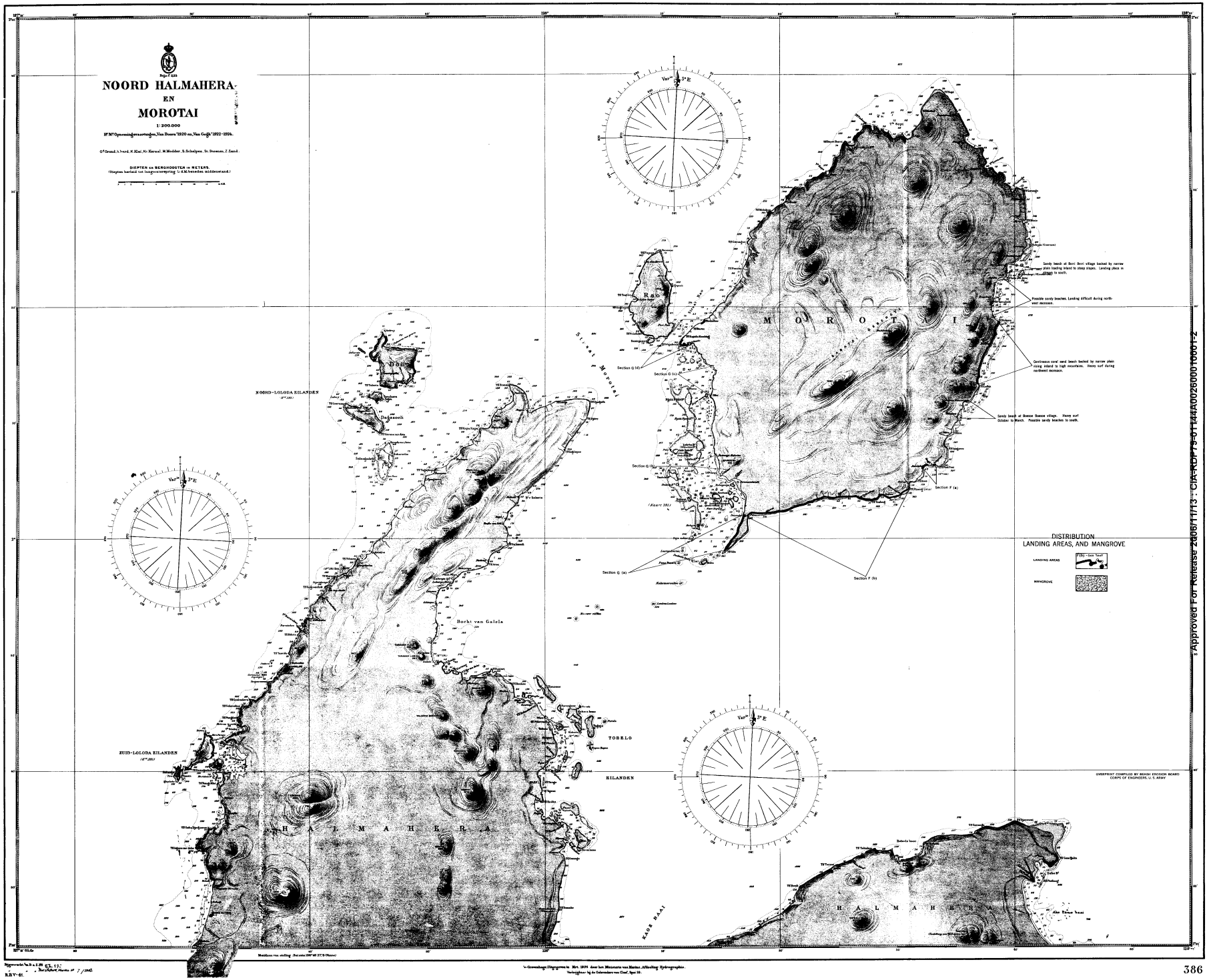
Used	Metric
Scales	10,000 Metres
Nearest similar reference with one letter distant	500 Kms.

No. 8 DODAGA
N100-E12800/30

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2
CONFIDENTIAL

CONFIDENTIAL

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2



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MOLUCCAN ISLANDS 1:125,000

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SANGOWE

FIRST EDITION-AMS 1

PLAN NO.16
JANIS 155
SHEET No. 3

MOLUCCA SEA

MOROTAI ISLAND

HALMAHERA SEA

Molokoe Pt
Gerongoe Pt
Poesoe Pt
Baroe Pt
Misio Pt
Selepia Pt
Roringosa Pt
Salema Doto Pt
Tawakale Pt
Boboro Pt
Lefau Pt
Mira Pt
Posi Posi Pt
Aroe Pt
Pinang Pt
Djoeoeboe
Djoeoeboe Pt
Toelang Pt
Totodokoe (Djoeoebela) Pt
Wawama
Pandanga
Igietoegeroea Pt
Lilialamo Pt
Lilliamatjeteke Pt
Dehegila
Dehegila Pt
Limaro Pt
ROEKIROEKITI I
ROEBENGGE I
LOENGOELOENGOEN I
MT TILAI
SABATAI MT
SISIGI MT
DOWORA MT
TAOEMADOJA MT
BENDERA MT
Doko R.
Sabatai-baroe
Sabatai-toea
Mamodjoe
Section F (a)
Section F (b)
Section G (a)

DISTRIBUTION OF LANDING AREAS

LANDING AREAS

F(a) - See text
Landing pier

SCALE 1:125,000

HEIGHTS IN FEET

Miles
Kilometers
Yards

CONTOUR INTERVAL 100 FEET

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator & 110 East
False Co-ordinates at Origin	3,900,000 meters East 900,000 meters North
Scale Factor	.997

NOTE: PERSONS USING THIS MAP WILL MAKE USEFUL CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS

O P L U T Q Y Z V

OVERPRINT COMPILED BY BEACH EROSION BOARD CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 10 MARCH 1945

TO GIVE A GRID REFERENCE ON THIS SHEET

LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz.:
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP. Ex.

POINT BOBORO PT	LETTERS U	
East		North
Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map.	6	Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map.
	9	5
East	69	North 55
REFERENCE	U6955	To nearest 1,000 metres
Unit		Metre
Square		10,000 Metres
Nearest similar reference with one letter distant		500 Kms.

A. M. S. T661 First Edition, 1943

Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service, Indianapolis unit, 1943.
Work Projects Administration Project, O. P. 165-2-00-3.
Compiled from Netherlands Topographic Service Maps of Moluccan Islands. (Res. Ternate), 1:100,000 (1925, 1926).

ROAD CLASSIFICATION

Primary Highways
Secondary Highways
Improved Roads
Unimproved Roads
Trail and Cart Tracks

No. 3 SANGOWE
N200-E12B15/30

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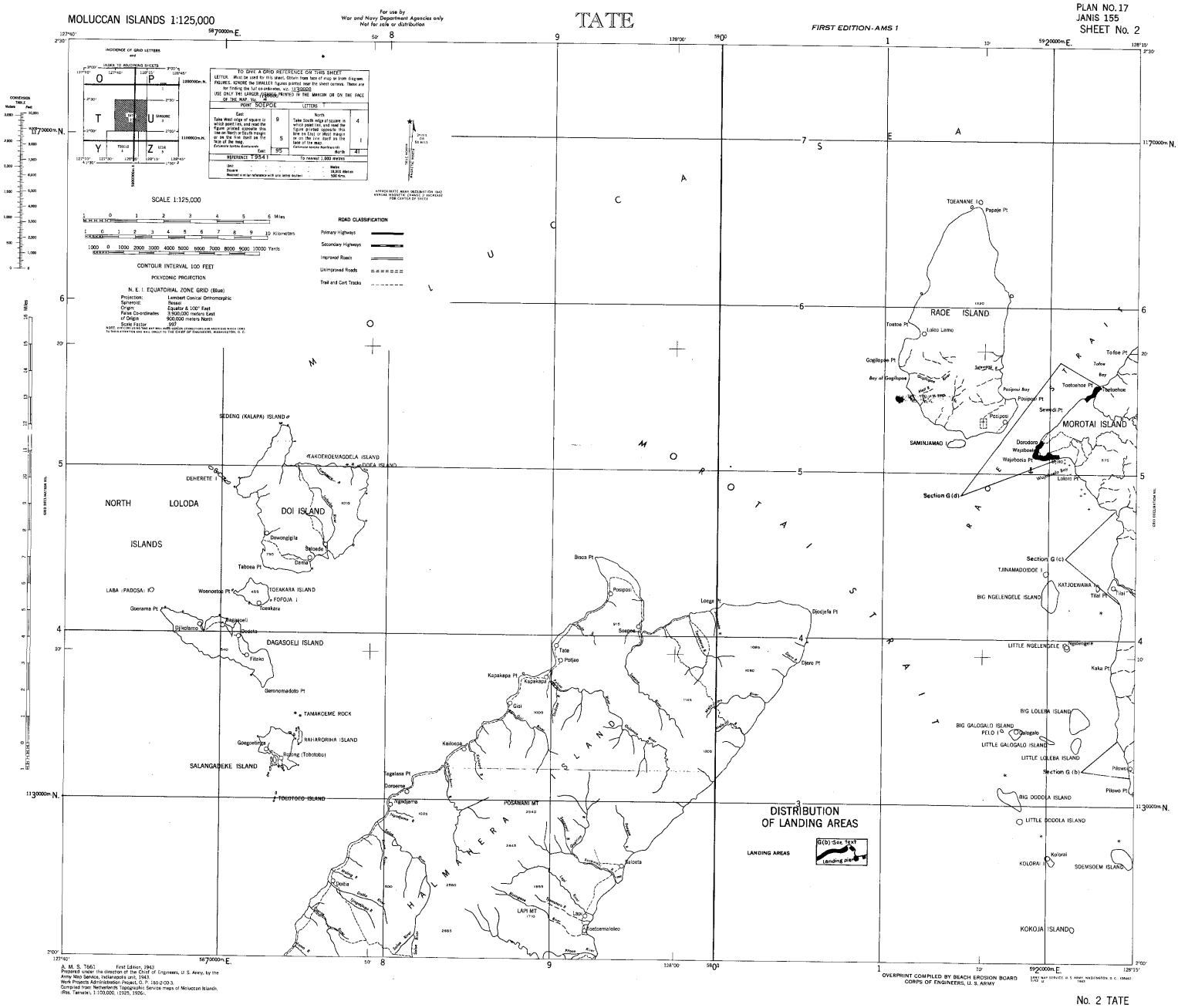
CONFIDENTIAL

CONFIDENTIAL
Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2



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PLAN NO.18
JANIS 155

CELEBES 1:200,000

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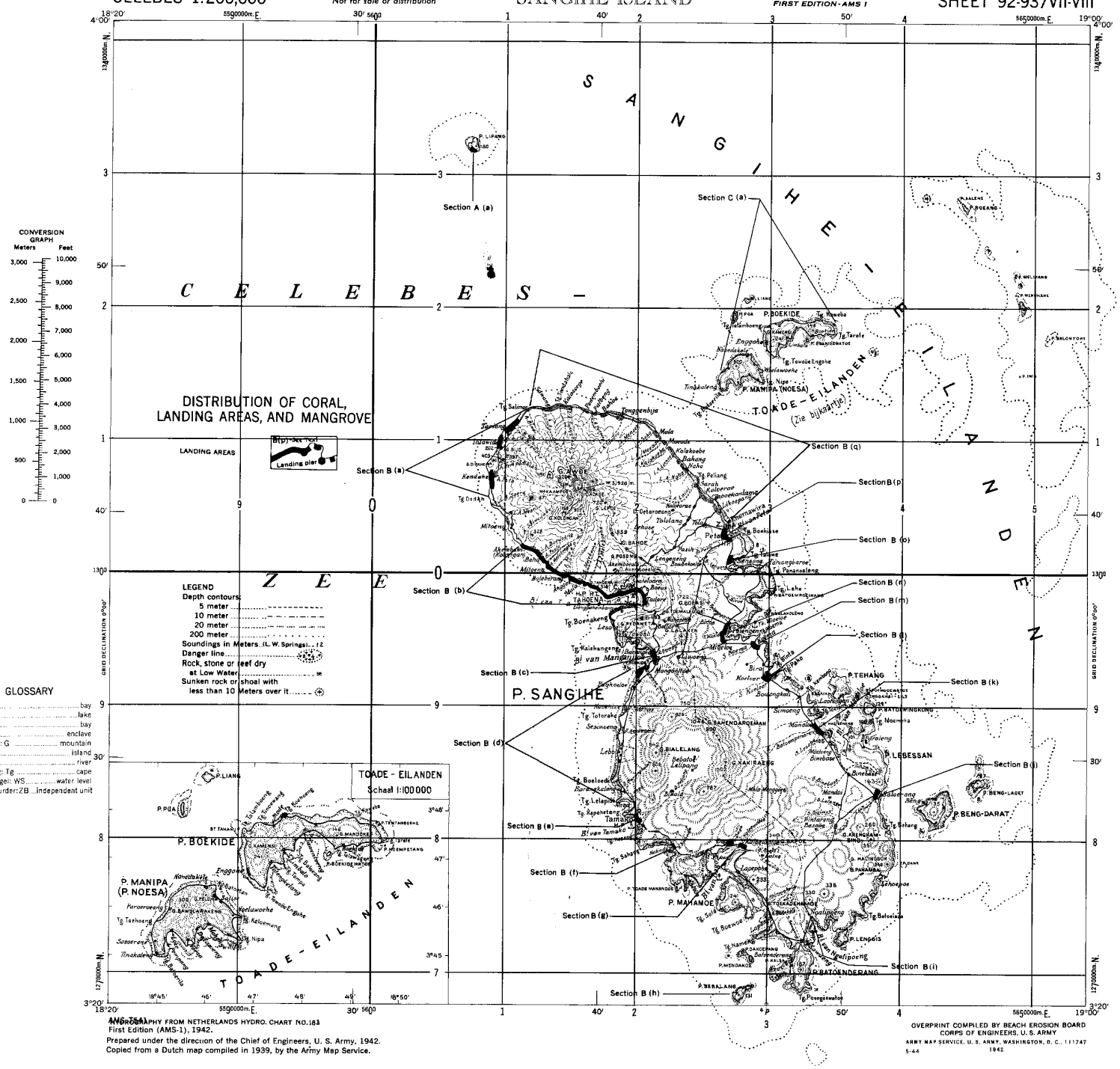
SANGIHE ISLAND

FIRST EDITION-AMS 1

SHEET 92-93/VII-VIII



TOPOGRAPHY FROM NETHERLANDS HYDRO. CHART NO.183
First Edition (AMS-1), 1942.
Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Copied from a Dutch map compiled in 1939, by the Army Map Service.

OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY
ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 111747
5-44 1942

INDEX TO ADMINISTRATIVE DIVISIONS

Division	Sangihe and Talaud Islands
Sub-division	Sangihe and Talaud Islands
A. Province	Kendahe-Tahoena
B. Province	Tawoekang
C. Province	Manganitoe

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS

Meridian of Batavia (which is 106°48'27.79"E of Greenwich)

Scale 1:200,000

2 0 2 4 6 8 10 12 14 Miles
5 0 5 10 15 20 Kilometers
5000 0 5000 10000 15000 20000 Yards

HEIGHTS IN METERS

TO GIVE A GRID REFERENCE ON THIS SHEET
LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz: L272000
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz: 1320000

POINT LIWDENG		LETTERS ML	
East		North	
Take West edge of square in which point lies, and read the figure printed opposite this on the North or South margin or on the sheet itself or on the face of the map. Estimate to tenths Eastwards	2	Take South edge of square in which point lies, and read the figure printed opposite this on the East or West margin or on the sheet itself or on the face of the map. Estimate tenths Northwards	9
	3		4
East	23	North	94
REFERENCE M2394		To nearest 1,000 metres	

Unit	Meters
Square	10,000 Metres
Nearest similar reference with one letter closest	100 Kms.

LEGEND

Automobile road	Settlement	Wayside stopping point	
Wagon road	Sparsely settled area	Radio station (receiving only)	
Horse path	Rice field	Mosque	UNSURVEYED
Foot path	Springs	Beacon	River
(a) - Bridge (b) - Kilometer post	Reefs	Anchorage	Contours
Provincial boundary	Sand	Marsh	Form lines
Divisional boundary	Spot elevations +496	Swamp	
Primary triangulation point	Secondary triangulation point		

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the south edge of the map with the value of the angle between GRID NORTH and MAGNETIC NORTH or related on the degree scale at the north edge of the map.

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North

SANGIHE ISLAND
N320-E12508/40

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D.C. [illegible]

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

CONFIDENTIAL

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PLAN NO.19
JANIS 155

CELEBES 1:200,000

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SIAOE ISLAND

FIRST EDITION-AMS 1

SHEET 92-93/IX-X

CONVERSION GRAPH
Meters / Feet

DISTRIBUTION OF CORAL AND LANDING AREAS

LANDING AREAS

H(g)- See Text
Landing pier

LEGEND
Depth contours:
5 meter
10 meter
20 meter
200 meter
Soundings in Meters (L.W. Springs) 12
Danger line
Rock, stone or reef dry at Low Water
Sunken rock or shoal with less than 10 Meters over it

GLOSSARY

Baai: B ..... bay
Dansu: D ..... lake
Djiko: Dk ..... bay
Enc ..... enclave
Goenoeng: G ..... mountain
Poelau: P ..... island
Salo: S ..... river
Tandjoeng: Tg ..... cape
Waterspiegel: WS ..... water level
Zelfbestuurder: ZB ... independent unit

C E L E B E S

S A N G I H E I

E A S T

N E T H E R L A N D S

STR. SIAOE

STR. TAHOELANDANG

P. SIAOE

P. KALAMA

P. KAHAKITANG

P. MAHENGETANG

P. SALANSKERE

P. PARA

P. MAKALEHI

P. BAWONDEKED

MENOENG EIL.

SANGEL OEHANG EIL.

Section E (a)
Section D (a)
Section D (b)
Section G (a)
Section F (a)
Section H (f)
Section H (e)
Section H (g)
Section H (a)
Section H (b)
Section H (d)
Section H (c)
Section I (a)

DELOE
P. PAHEP
P. MAHORO (169)
P. SOLONTOMS
P. GOENATIN

AMS T541
HYDROGRAPHY FROM NETHERLANDS HYDRO. CHART NO.163
First Edition (AMS-1), 1942.
Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Copied from a Dutch map compiled in 1939, by the Army Map Service.

OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. 111746
6-44 1942

INDEX TO ADMINISTRATIVE DIVISIONS

	Division	Sub-division	Province
B	Sangihe and Talaud Islands	Sangihe and Talaud Islands	Siaoe

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS

Meridian of Batavia (which is 106°48'27.79" E of Greenwich)

Scale 1:200,000

14 Miles
20 Kilometers
20000 Yards

HEIGHTS IN METERS

LEGEND

Automobile road
Wagon road
Horse path
Foot path
(a)-Bridge (b)-Kilometer post
Provincial boundary
Divisional boundary
Primary triangulation point
Settlement
Sparsely settled area
Rice field
Springs
Reefs
Sand
+496 Spot elevations
Secondary triangulation point
Wayside stopping point
Radio station (receiving only)
Mosque
Beacon
Anchorage
Marsh
Swamp
UNSURVEYED
River
Contours
Form lines

TO GIVE A GRID REFERENCE ON THIS SHEET
LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz. 3590000
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz. 592000

POINT BEONG — LETTERS M

East		North	
Take West edge of square on which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map.	0	Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map.	0
Estimate tenths if necessary.	6	Estimate tenths if necessary.	4
East	06	North	04
REFERENCE 0604		To nearest 1,000 meters	
Unit / Square / Nearest similar reference with one letter distant		Metre / 10,000 Metres / 100 Kms.	

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the south edge of the map with the value of the angle between GRID NORTH and MAGNETIC NORTH as plotted on the degree scale at the north edge of the map.

SIAOE ISLAND
N240-E12508/40

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE DIRECTOR OF ENGINEERS, WASHINGTON, D.C.

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

CONFIDENTIAL

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PLAN NO. 20
JANIS 155
SHEET 92-93/XI-XII

CELEBES 1:200,000

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TALOELANDANG ISLAND

FIRST EDITION-AMS 1

P. SIAOE

STR. TAHOELANDANG

P. PASIGE

P. TAHOELANDANG

P. ROBANG

P. BIARO

Section J (c)
Section J (b)
Section J (a)
Section K (a)
Section L (a)
Section L (b)
Section L (c)

CONVERSION GRAPH
Meters / Feet

GLOSSARY

Baai: B ..... bay
Danau: D ..... lake
Djiko: Dk ..... bay
Enc ..... enclave
Goenoeng: G ..... mountain
Poelau: P ..... island
Salo: S ..... river
Tandjoeng: Tg ..... cape
Waterspiegel: WS ..... water level
Zelfbestuurder: ZB ... independent unit

DISTRIBUTION OF CORAL, LANDING AREAS, AND MANGROVE

LANDING AREAS

J(b)-See Text
Landing pier

LEGEND
Depth contours:
5 meter
10 meter
20 meter
200 meter
Soundings in Meters (L.W. Springs)
Danger line
Rock, stone or reef dry at Low Water
Sunken rock or shoal with less than 10 Meters over it

HYDROGRAPHY FROM NETHERLANDS HYDRO. CHART NO.183
First Edition (AMS-1), 1942.
Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Copied from a Dutch map compiled in 1939, by the Army Map Service.

OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY
ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., I I I 750
5-44 1942

INDEX TO ADMINISTRATIVE DIVISIONS

Division — Sangihe and Talaud Islands
Sub-division 1. Province — Sangihe and Talaud Islands
2. Province — Tahoelandang
Siaoe

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS

Meridian of Batavia (which is 106°48'27.79"E of Greenwich)

Scale 1:200,000

HEIGHTS IN METERS

LEGEND

Automobile road
Wagon road
Horse path
Foot path
(a)-Bridge (b)-Kilometer post
Provincial boundary
Divisional boundary
Primary triangulation point
Settlement
Sparsely settled area
Rice field
Springs
Reefs
Sand
Spot elevations
Secondary triangulation point
Wayside stopping point
Radio station (receiving only)
Mosque
Beacon
Anchorage
Marsh
Swamp
River
Contours
Form lines

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

TO GIVE A GRID REFERENCE ON THIS SHEET
LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz. 529 000E
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN ON ON THE FACE OF THE MAP, viz. 553000
POINT KARDENGO — LETTERS N

East: Take West edge of square on which point lies, and read the figure printed opposite this line on the South margin of the face of the map.	0	North: Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin of on the thin insert on the face of the map.	3
	9		4
East 09		North	34
REFERENCE N 0934		To nearest 1,000 metres	
Unit: Square		Metre: 10,000 Metres, 100 Sets	
Numeral under reference with one letter distant			

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection: Lambert Conical Orthomorphic
Spheroid: Bessel
Origin: Equator and 110°E
False Co-ordinates of Origin: 3,900,000 meters East, 930,000 meters North

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the south edge of the map with the value of the angle between GRID NORTH and MAGNETIC NORTH, as plotted on the degree scale at the north edge of the map.

TAHOELANDANG ISLAND
N200-E12508/40

CONFIDENTIAL

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

CONFIDENTIAL

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PLAN NO. 21
JANIS 155

CELEBES 1:200,000

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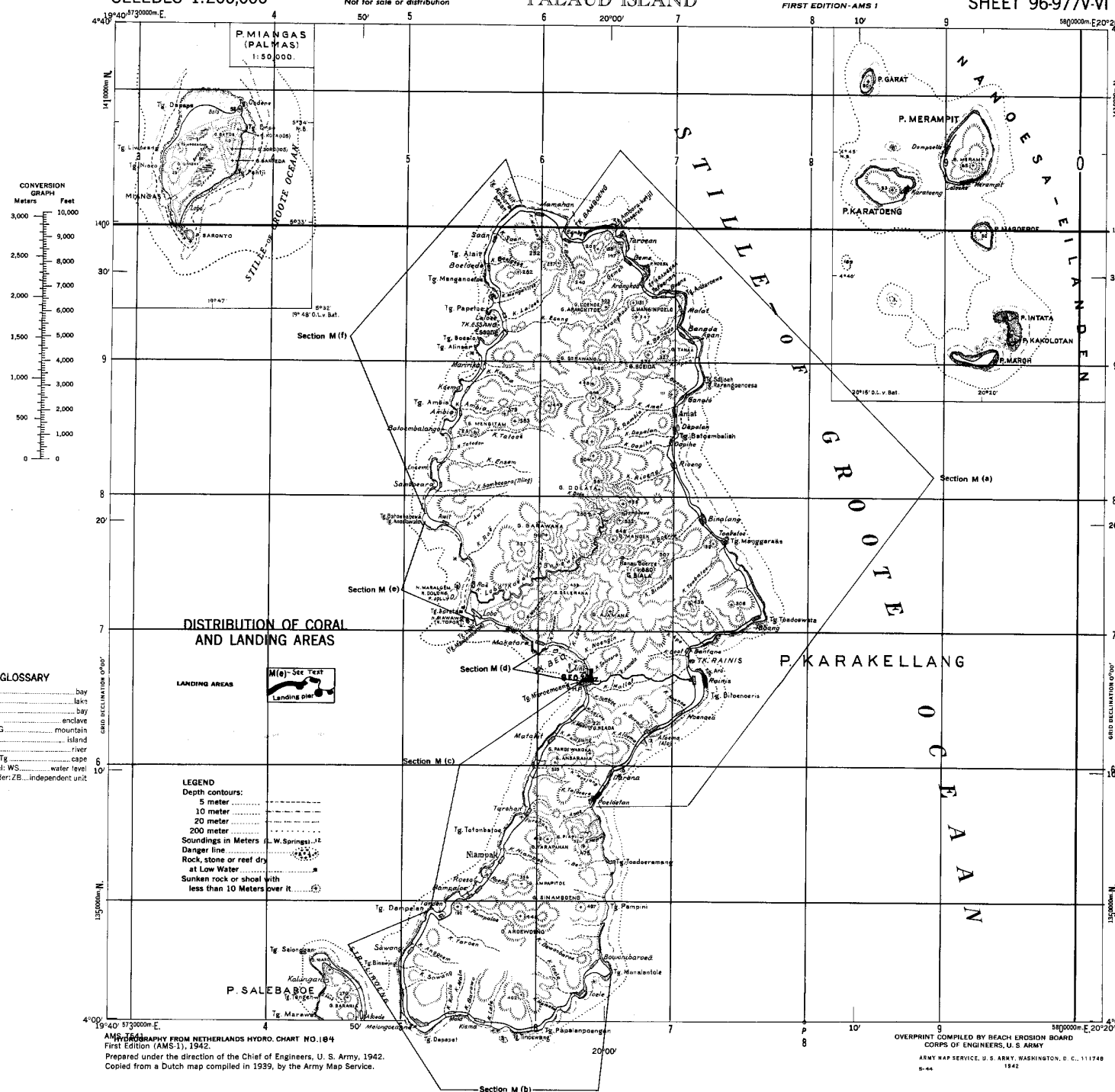
TALAUD ISLAND

FIRST EDITION-AMS 1

SHEET 96-97/V-VI



HYDROGRAPHY FROM NETHERLANDS HYDRO. CHART NO. 184
First Edition (AMS-1), 1942.
Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Copied from a Dutch map compiled in 1939, by the Army Map Service.

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CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 111748
5-44 1942

INDEX TO ADMINISTRATIVE DIVISIONS

Division — Sangihe and Talaud islands
Sub-division — Sangihe and Talaud Islands
Province — Talaud Islands

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS

Meridian of Batavia (which is 106°48'27.79"E of Greenwich)

Scale 1:200,000

HEIGHTS IN METERS

LEGEND

- Automobile road
- Wagon road
- Horse path
- Foot path
- (a) - Bridge (b) - Kilometer post
- Provincial boundary
- Divisional boundary
- Primary triangulation point
- Settlement
- Sparsely settled area
- Rice field
- Springs
- Reefs
- Sand
- +496 Spot elevations
- Secondary triangulation point
- Wayside stopping point
- Radio station (receiving only)
- Mosque
- Beacon
- Anchorage
- Marsh
- Swamp
- UNSURVEYED River
- Contours
- Form lines

TO GIVE A GRID REFERENCE ON THIS SHEET
LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz. 1230000
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz. 971200

POINT	TABANG	LETTERS H
East	Take West edge of square in which point lies and read the figure printed opposite this line in North or South margin or on the line itself on the face of the map. Estimate tenths Eastwards	7
East	77	
North	Take South edge of square in which point lies and read the figure printed opposite this line in East or West margin or on the line itself on the face of the map. Estimate tenths Northwards	1
North		71

REFERENCE H7771 — To nearest 1,000 metres

Unit	Metres	Metres
Square	10,000 Metres	
Nearest similar reference with one letter distant	100 Kms.	

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North

TALAUD ISLANDS
N400-E12628/40

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the south edge of the map with the value of the angle between GRID NORTH and MAGNETIC NORTH, as plotted on the degree scale at the north edge of the map.

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

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PHILIPPINE ISLANDS 1:500,000

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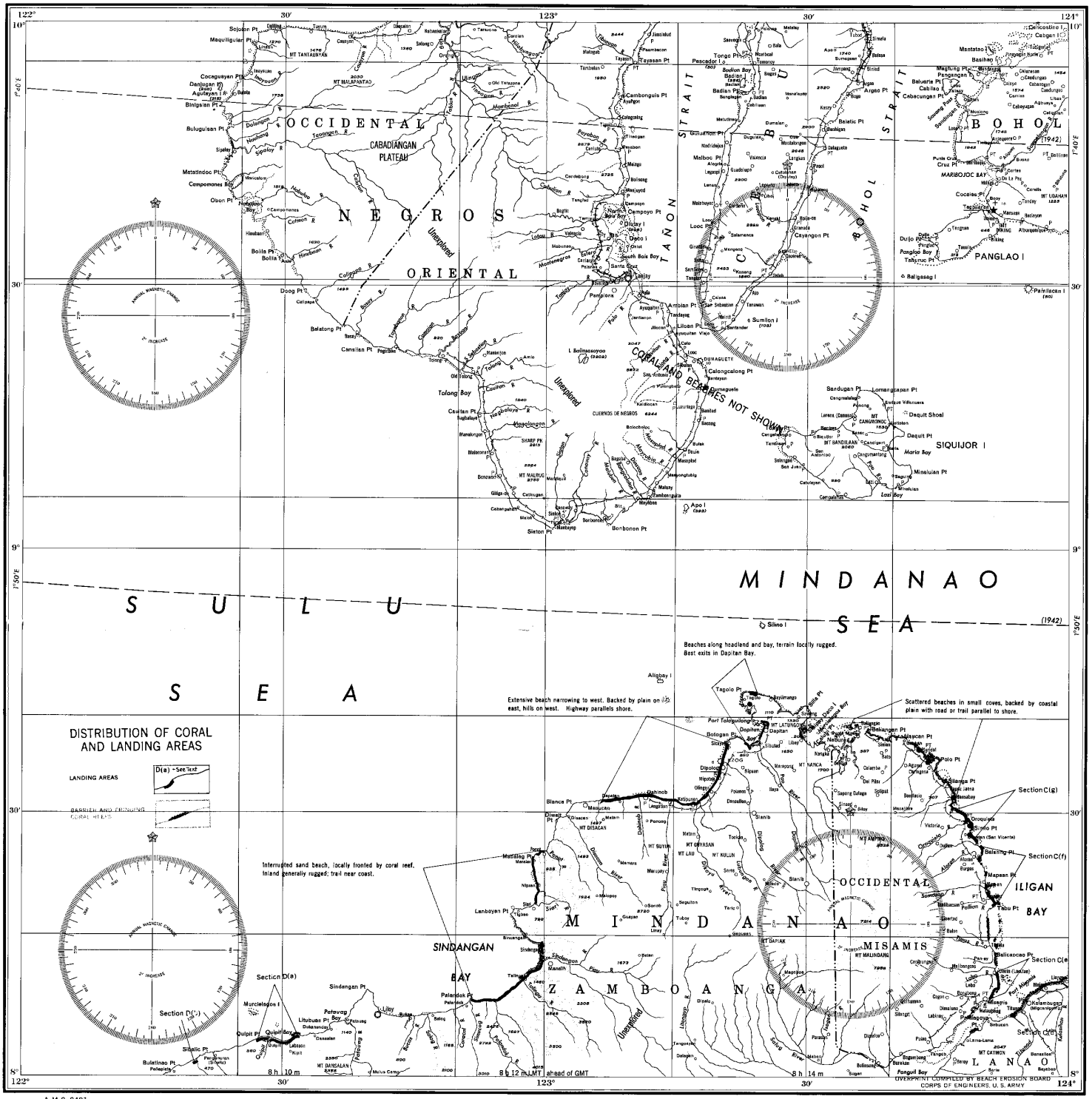
DIPOLOG

FIRST EDITION-AMS 1

PLAN NO.24
JANIS 155
NC 51-5


OCCIDENTAL
NEGROS
ORIENTAL
CABADIANGAN PLATEAU
BOHOL
PANGLAO I
SIQUIJOR I
SULU SEA
MINDANAO SEA
MINDANAO
ILIGAN BAY
SINDANGAN BAY
ZAMBOANGA
MISAMIS
OCCIDENTAL
CORAL AND BEACHES NOT SHOWN
Unexplored
Beaches along headland and bay, terrain locally rugged. Best exits in Dapitan Bay.
Extensive beach narrowing to west. Backed by plain on east, hills on west. Highway parallels shore.
Scattered beaches in small coves, backed by coastal plain with road or trail parallel to shore.
Interrupted sand beach, locally fronted by coral reef. Inland generally rugged; trail near coast.
DISTRIBUTION OF CORAL AND LANDING AREAS
LANDING AREAS
D(a) - See Text
BARRIER AND FRINGING CORAL REEFS
Section C(f)
Section C(g)
Section D(a)
Section D(b)
8 h 10 m
8 h 12 m LMT ahead of GMT
8 h 14 m
OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY

A. M. S. S401

LEGEND

Administrative Cities
Population over 100,000 — REDON
Population 25,000 to 100,000 — REDONDIN
Population 10,000 to 25,000 — Redondinhs
Population 5,000 to 10,000 — Recondinha
Population 1,000 to 5,000 — Redondiella
Population less than 1,000 — Redondiella
Roads: 1st class
Roads: 2nd class
Roads: 3rd class
Roads: 4th class
Trails
Railroads: Broad Gauge
Railroads: Narrow Gauge
Railroads: Standard Gauge
Railroads: Electric

Boundaries: International
Boundaries: International Indefinite
Boundaries: Intercolonial
Boundaries: State, Province or Colony
Lines of Equal Magnetic Declination — 1°50'E
Transmission Line
Lighting Facilities at Field
Radio Station, Radio Beacon (with descriptive notes)
Radio Direction Finder Station
Telephone Station — P
Telephone and Telegraph Station — PT
Located Object (with descriptive notes)
Spot Elevations (Natural Features) in feet — 2475
Spot Elevations (Cultural Features) in feet — 1956
Field — Anchorage
Government, Army, Navy
Municipal or Commercial
Auxiliary or Emergency

Scale 1:500,000

Miles: 10 8 6 4 2 0 10 20 30
Kilometers: 10 8 6 4 2 0 10 20 30 40 50
Yards: 10000 0 10000 20000 30000 40000 50000

Polyconic Projection

Prepared under the direction of the Chief of Engineers, U. S. Army, Washington, D. C. Compiled by the Army Map Service from the following sources: USC&GS Charts 4429, 4430, 4431, 4432, 4504, 4505, 4506, - USC&GS Topographic Maps 19, 16 and 50 - Bureau of Public Works Road Maps 8, 9, 10 and 12 - Commission of the Census Atlas, Vols. 1 & 5 - Communications Map C.N. 15 and USC&GS Airway Map A-3 and Aeronautical Charts Nos. 3 and 4.

1°40'E 9°09' 3 MILS 1°40'E 20 MILS TRUE NORTH

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 2' INCREASE

FIFTY THOUSAND YARD PHILIPPINE ZONE GRID
THE LAST THREE DIGITS OF THE GRID NUMBERS ARE OMITTED

CONVERSION TABLE

Meters	Feet
2,500	9,000
2,000	8,000
2,000	7,000
1,500	6,000
1,000	5,000
1,000	4,000
500	3,000
	2,000
	1,000
0	0

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 1942
2/43 C.T.

SHEET INDEX

DIPOLOG
N800-E12200/200

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2
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PHILIPPINE ISLANDS 1:500,000

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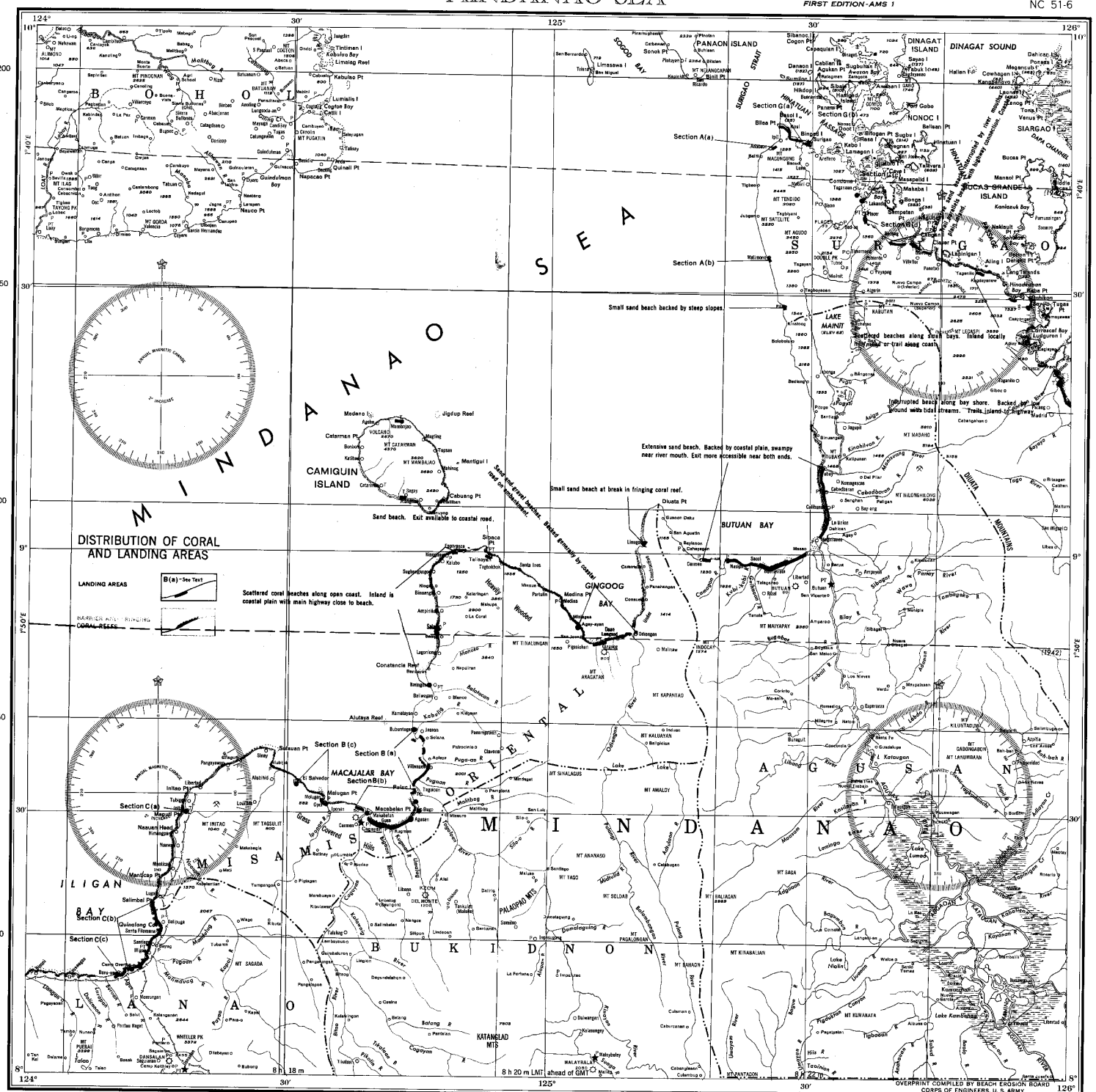
MINDANAO SEA

PLAN NO. 23
JANIS 155
NC 51-6

FIRST EDITION-AMS 1


MINDANAO SEA
DISTRIBUTION OF CORAL AND LANDING AREAS
LANDING AREAS
B(a)-See Text
BARRIER AND FRINGING CORAL REEFS
CAMIGUIN ISLAND
PANAON ISLAND
DINAGAT ISLAND
DINAGAT SOUND
SIARGAO
SIARGAO STRAIT
SURIGAO STRAIT
BOHOL
MINDANAO
LEYTE
SURIGAO
BUTUAN BAY
GINGOOG BAY
MACAJALAR BAY
ILIGAN BAY
MISAMIS
AGUSAN
BUKIDNON
LANAO
Section A(a)
Section A(b)
Section B(a)
Section B(b)
Section B(c)
Section C(a)
Section C(b)
Section C(c)
Section G(a)
Section G(b)
Section G(c)
Jigdup Reef
Jigdup Point
Sibuco Pt
Alutaya Reef
Diuata Pt
Sibanac Pt
Cogon Pt
Limasawa I
Kabulao Pt
Napacao Pt
Quinali Pt
Bilas Pt
Nonoc I
Bucas Grande Island
Mahaba I
Mansol Pt
Tubajon
Lake Mainit
Nabutan
Diuata Mountains
Agusan River
Mt Hibong-Hibong
Mt Kinabalian
Mt Kimbaraya
Mt Katanglad
Palaopao Mts
Mt Pasalongan
Mt Pantaron
Mt Balagan
Mt Saga
Mt Amalog
Mt Sinaglagus
Mt Tinaluingan
Mt Kapantao
Mt Kalubian
Mt Maiyapay
Mt Hilongohilong
Mt Magbo
Mt Kilutadum
Mt Dabongabon
Mt Lanuwanan
Mt Tagsulit
Mt Initac
Mt Sagada
Mt Pugan
Mt Ananaso
Mt Tago
Mt Soldab
Mt Aragatan
Mt Indocay
Mt Tendido
Mt Satellite
Mt Agudo
Mt Lecaspi
Mt Madaho
Mt Tubay
Mt Pugay
Mt Bongo
Mt Masapelid
Mt Tagbuan
Mt Tagbayasan
Mt Tagbaloan
Mt Tagbalay
Mt Tagbal

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PLAN NO. 22
JANIS 155

CELEBES 1:200,000

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SHEET 96-97/VII-VIII

FIRST EDITION-AMS 1

LIROENG

P. SALEBABOE

P. KABAROEANG

STILLE OF GROOTE OCEAAN

DISTRIBUTION OF CORAL AND LANDING AREAS

LANDING AREAS

LEGEND
Depth contours:
5 meter
10 meter
20 meter
200 meter
Soundings in Meters. (L.W. Springs) 12
Danger line
Rock, stone or reef dry at Low Water
Sunken rock or shoal with less than 10 Meters over it

CONVERSION GRAPH
Meters / Feet

GLOSSARY
Baai: B ..... bay
Danau: D ..... lake
Djiko: Dk ..... bay
Enc ..... enclave
Goenoeng: G ..... mountain
Poelau: P ..... island
Salo: S ..... river
Tandjoeng: Tg ..... cape
Waterspiegel: WS ..... water level
Zelfbestuurder: ZB ..... independent unit

AMS 7541
HYDROGRAPHY FROM NETHERLANDS HYDRO. CHART NO. 184
First Edition (AMS-1), 1942.
Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Copied from a Dutch map compiled in 1939, by the Army Map Service.

OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 111745
5-44 1942

INDEX TO ADMINISTRATIVE DIVISIONS

Division: Sangihe and Talaud Islands
Sub-division: Sangihe and Talaud Islands
Province: Talaud Islands

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS

Meridian of Batavia (which is 106°48'27.79"E of Greenwich)

Scale 1:200,000

HEIGHTS IN METERS

LEGEND
Automobile road
Wagon road
Horse path
Foot path
(a) - Bridge (b) - Kilometer post
Provincial boundary
Divisional boundary
Primary triangulation point
Secondary triangulation point
Settlement
Sparsely settled area
Rice field
Springs
Reefs
Sand
Spot elevations
Wayside stopping point
Radio station (receiving only)
Mosque
Beacon
Anchorage
Marsh
Swamp
Contours
River
Form lines

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

TO GIVE A GRID REFERENCE ON THIS SHEET
LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz.: 2360000
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OF OR ON THE FACE OF THIS MAP, Viz.: 8721

POINT	SIXING	LETTERS
East: Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map. Estimate tenths if necessary.	7	North: Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map. Estimate tenths if necessary.
East	97	North 41

REFERENCE H8721

To nearest 1,000 metres

Unit	Metres
Square	10,000 Metres
Nearest similar reference with one letter altered	500 Kms.

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3' INCREASE

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the south edge of the map with the value of the angle between GRID NORTH and MAGNETIC NORTH, as plotted on the degree scale at the north edge of the map.

LIROENG
N320-E12628/40

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Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PLAN NO. 25
JANIS 155

PHILIPPINE ISLANDS 1:500,000

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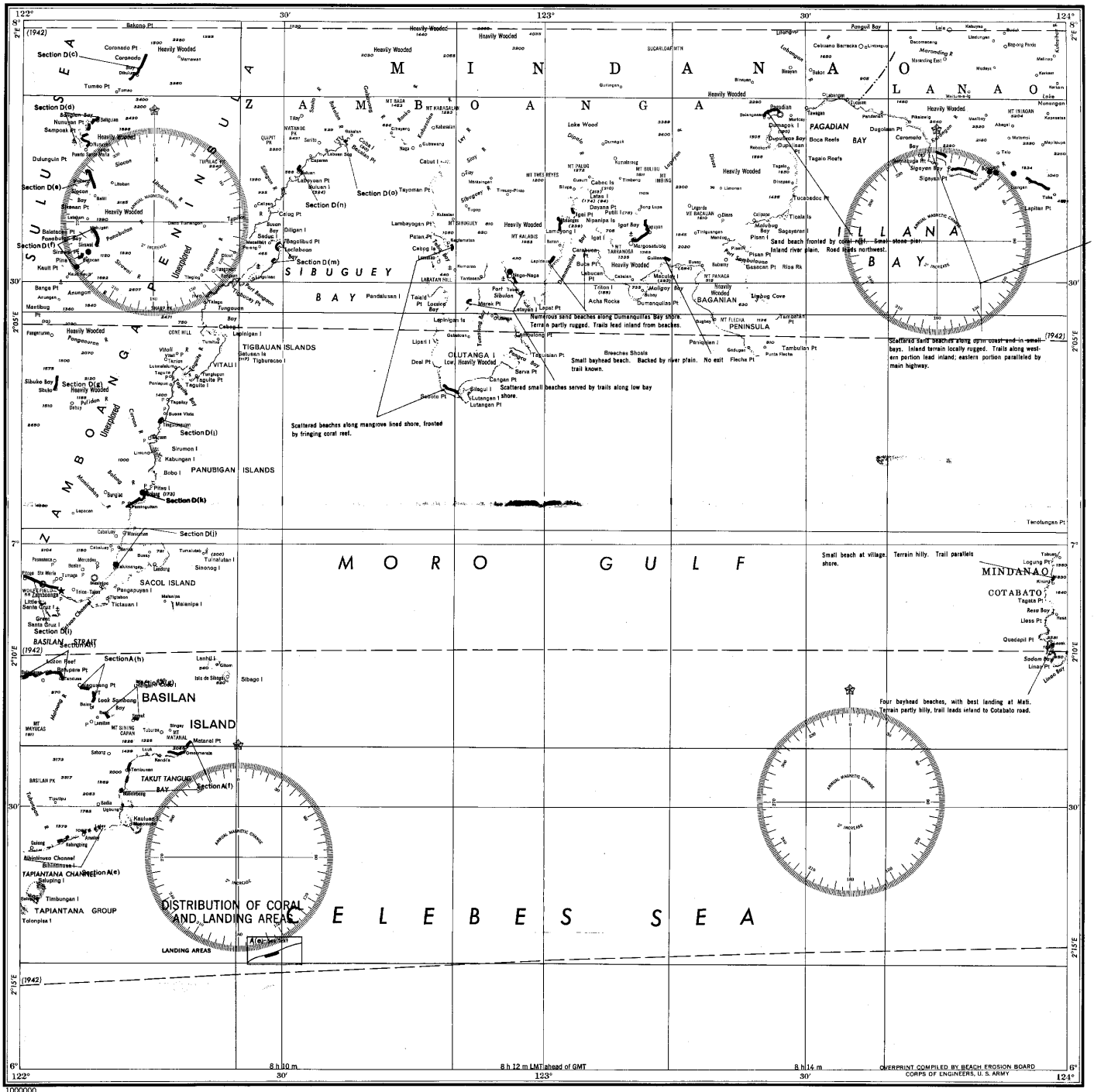
MORO GULF

FIRST EDITION-AMS 1

NB 51-2



8 h 30 m — 8 h 12 m LMT ahead of GMT — 8 h 14 m

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CORPS OF ENGINEERS, U. S. ARMY

1000000 — 1050 — 1100 — 1150 — 1200

A. M. S. S401

LEGEND

- Administrative Cities
- Population over 100,000 — REDON
- Population 25,000 to 100,000 — REDONDIN
- Population 10,000 to 25,000 — Redondinha
- Population 5,000 to 10,000 — Redondinha
- Population 1,000 to 5,000 — Redondinha
- Population less than 1,000 — Redondinha
- Roads: 1st class
- Roads: 2nd class
- Roads: 3rd class
- Roads: 4th class
- Trails
- Railroads: Broad Gauge
- Railroads: Narrow Gauge
- Railroads: Standard Gauge
- Railroads: Electric

Boundaries: International
Boundaries: International Indefinite
Boundaries: Intercolonial
Boundaries: State, Province or Colony
Lines of Equal Magnetic Declination — 2°10'E
Transmission Line
Lighting Facilities at Field — LF
Radio Station, Radio Beacon, (with descriptive notes)
Radio Direction Finder Station
Telephone Station — P
Telephone and Telegraph Station — PT
Located Object (with descriptive notes)
Spot Elevations (Natural Features) in feet — 2478
Spot Elevations (Cultural Features) in feet — 1955 Field, Anchorage
Government, Army, Navy
Municipal or Commercial
Auxiliary or Emergency

Scale 1:500,000

10 0 10 20 30 Miles
10 8 6 4 2 0 10 20 30 40 50 Kilometers
10000 0 10000 20000 30000 40000 50000 Yards

Polyconic Projection

Prepared under the direction of the Chief of Engineers, U. S. Army, Washington, D. C. Compiled by the Army Map Service from the following sources: USC&GS Charts 4511, 4512, 4605, 4606, 4607 - USC&GS Topographic Map No. 50 - Bureau of Public Works Road Maps 10 and 12 - Commission of the Census Atlas Vols. I & II - Communications Map C. M. 15 - Marine Corps School Map P. 30 and USC&GS Airway Map No. A-3 and Aeronautical Chart No. 4

FIFTY THOUSAND YARD PHILIPPINE ZONE GRID
THE LAST THREE DIGITS OF THE GRID NUMBERS ARE OMITTED

APPROXIMATE MEAN DECLINATION 1945
ANNUAL MAGNETIC CHANGE 2' INCREASE

CONVERSION TABLE

Meters	Feet
3,000	9,000
2,500	8,000
2,000	7,000
1,500	6,000
1,000	5,000
500	4,000
0	3,000
	2,000
	1,000
	0

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 1943-1944
2/44 C.E.

SHEET INDEX

MORO GULF
N600-E12200/200

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2
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PHILIPPINE ISLANDS 1:500,000

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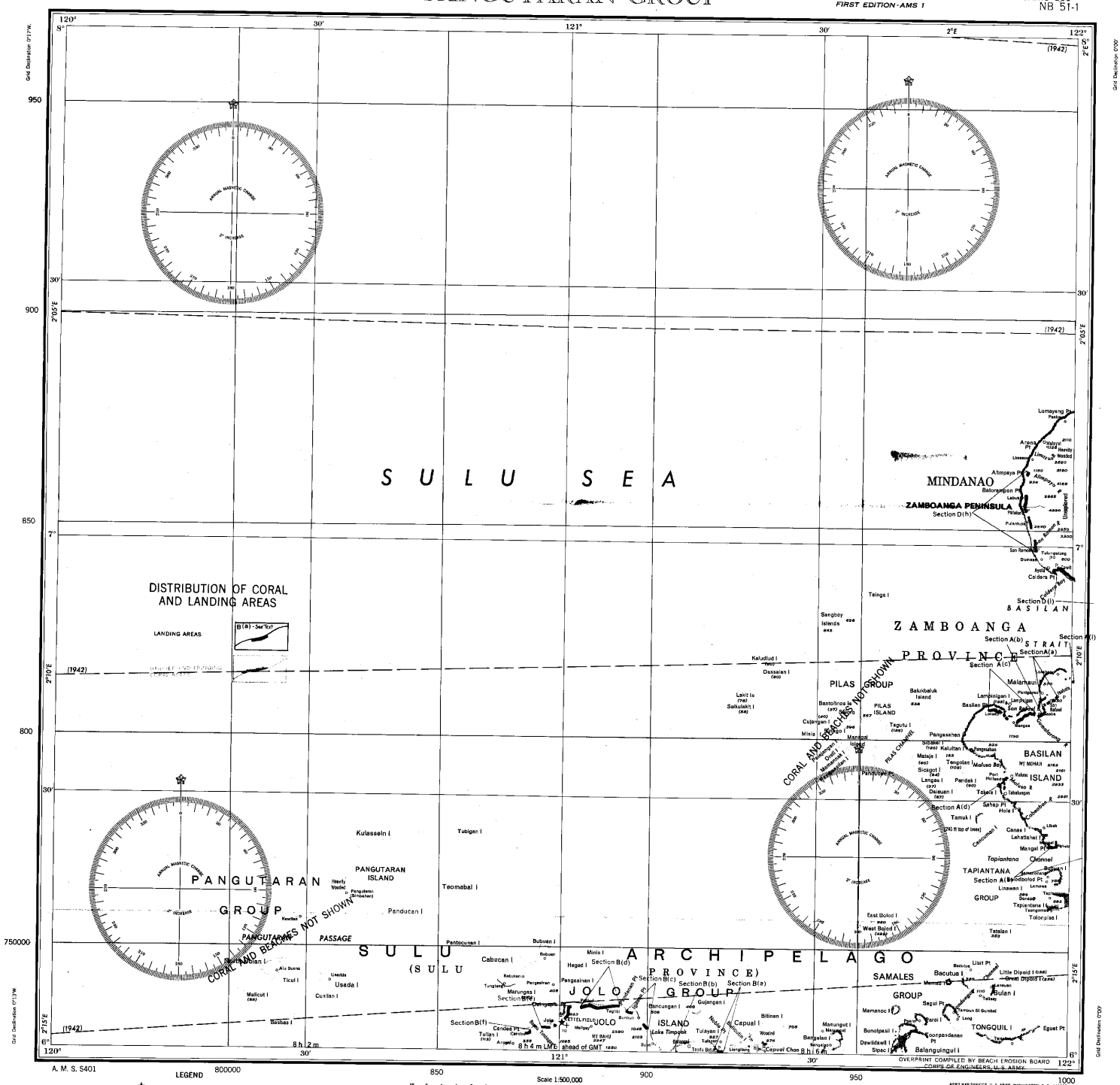
PANGUTARAN GROUP

FIRST EDITION-AMS 1

PLAN NO.26
JANIS 155
NB 51-1



OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U.S. ARMY

A. M. S. S401

LEGEND

- Administrative Cities
- Population over 100,000 — REDON
- Population 25,000 to 100,000 — REDONDIN
- Population 10,000 to 25,000 — Redondinha
- Population 5,000 to 10,000 — Redondinha
- Population 1,000 to 5,000 — Redondinha
- Population less than 1,000 — Redondinha
- Roads: 1st class
- Roads: 2nd class
- Roads: 3rd class
- Roads: 4th class
- Trails
- Railroads: Broad Gauge
- Railroads: Narrow Gauge
- Railroads: Standard Gauge
- Railroads: Electric
- Boundaries: International
- Boundaries: International Indefinite
- Boundaries: Intercolonial
- Boundaries: State, Province or Colony
- Lines of Equal Magnetic Declination — 2°10'E
- Transmission Line
- Lighting Facilities at Field — LF
- Radio Station, Radio Beacon, Radio Direction Finder Station (with descriptive notes) ⊙
- Telephone Station — P
- Telephone and Telegraph Station — PT
- Located Object (with descriptive notes) — O
- Spot Elevations (Natural Features) in feet — 2475
- Spot Elevations (Cultural Features) in feet — 1935
- Field / Anchorage
- Government, Army, Navy
- Municipal or Commercial
- Auxiliary or Emergency

Scale 1:500,000

10 8 6 4 2 0 10 20 30 Miles
10 8 6 4 2 0 10 20 30 40 50 Kilometers
10000 0 10000 20000 30000 40000 50000 Yards

Polyconic Projection

Prepared under the direction of the Chief of Engineers, U. S. Army, Washington, D. C. Compiled by the Army Map Service from the following sources: USC&GS Charts 4511, 4512, 4513, 4516, 4517, 4518, 4605 - USC&GS Topographic Map No. 60 - Bureau of Public Works Road Maps 12 and 13 - Commission of the Census Atlas Vols. 1 & 5 - Communications Maps C. M. 15 & C. M. 16 and USC&GS Aeronautical Charts 3 and 4

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 2° INCREASE

FIFTY THOUSAND YARD PHILIPPINE ZONE GRID
THE LAST THREE DIGITS OF THE GRID NUMBERS ARE OMITTED

CONVERSION TABLE

Meters	Feet
2,500	9,000
2,000	8,000
	7,000
	6,000
1,500	5,000
	4,000
1,000	3,000
	2,000
500	1,000
0	0

AGNY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C.
3/52 EE

SHEET INDEX

PANGUTARAN GROUP
N600-E12000/200

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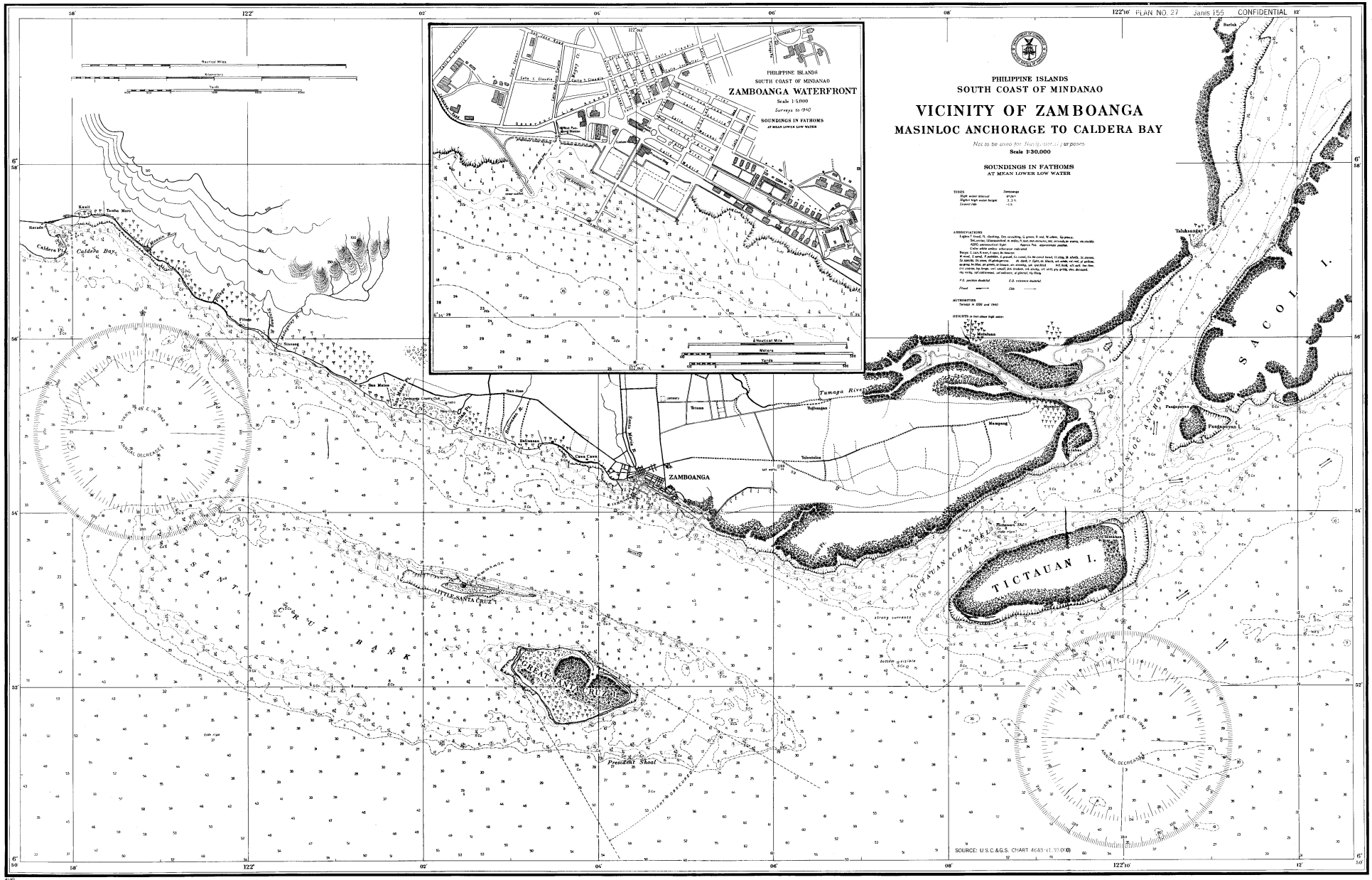
Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2



Special Printing at Wash., D. C. (reprint 42-1941)

Published at Manila, P. I. Aug. 1941
BY THE U.S. COAST AND GEODETIC SURVEY
C. O. Collins, Director

LIGHTS, BEACONS, BUOYS AND DANGERS CORRECTED
FOR INFORMATION RECEIVED TO DATE OF ISSUE

(Zamboanga, Masinloc Anch. to Caldera Bay) U.S.C.&G.S. 4645

PRICE 90 CENTS

4645

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

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PLAN NO. 28
JANIS 155
NB 51-3

PHILIPPINE ISLANDS 1:500,000

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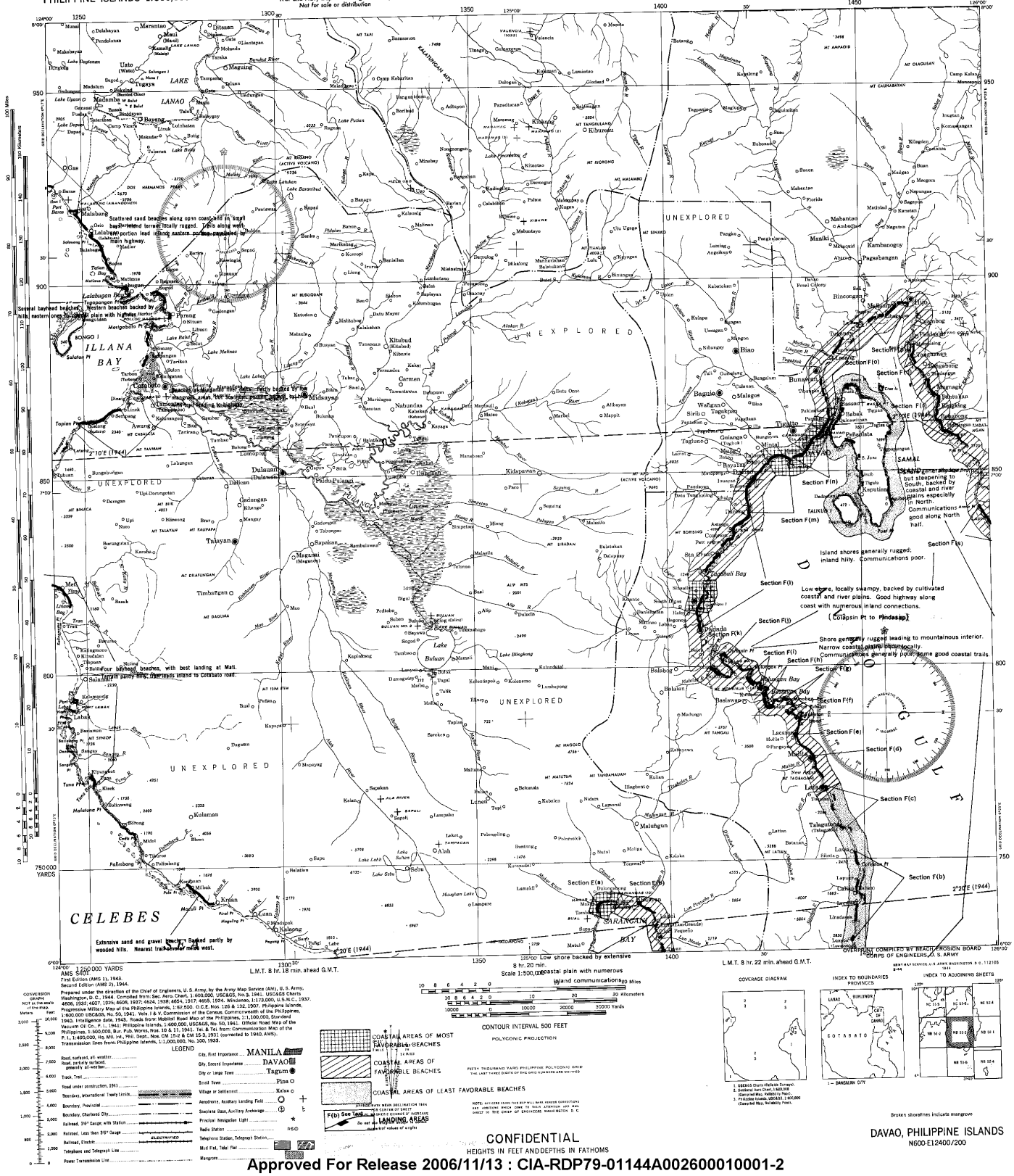
DAVAO

SECOND EDITION - AMS 2


UNEXPLORED
ILLANA BAY
SARANGANI BAY
CELEBES
Scattered sand beaches along open coast and in small bays. Behind terrain locally rugged. Trails along west, eastern portion lead inland eastern portion paralleled by main highway.
Several bayhead beaches, Western beaches backed by hills, eastern ones by coastal plain with highway.
Four bayhead beaches, with best landing at Mati.
Extensive sand and gravel beaches backed partly by wooded hills. Nearest trails over miles west.
Low shore backed by extensive coastal plain with numerous inland communications.
Island shores generally rugged; inland hilly. Communications poor.
Low shore, locally swampy, backed by cultivated coastal and river plains. Good highway along coast with numerous inland connections.
Shore generally rugged leading to mountainous interior. Narrow coastal plains discontinuously. Communications generally poor, some good coastal trails.
SAMAL Island generally low, flat, but steepening to South, backed by coastal and river plains especially North. Communications good along North half.
Section F(a)
Section F(b)
Section F(c)
Section F(d)
Section F(e)
Section F(f)
Section F(g)
Section F(h)
Section F(i)
Section F(k)
Section F(l)
Section F(m)
Section F(n)
Section F(o)
Section E(a)
Section E(b)
2°20'E (1944)
20°E (1944)
L.M.T. 8 hr. 18 min. ahead G.M.T.
L.M.T. 8 hr. 22 min. ahead G.M.T.
8 hr. 20 min.
Scale 1:500,000
CONTOUR INTERVAL 500 FEET
POLYCONIC PROJECTION
750,000 YARDS
1,250,000 YARDS

AMS 5401
First Edition (AMS 1), 1943.
Second Edition (AMS 2), 1944.

Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service (AM), U. S. Army, Washington, D. C., 1944. Compiled from: Sec. Aero. Chart, 1:600,000, USC&GS, No. 8, 1941; USC&GS Charts 4606, 1932; 4607, 1925; 4605, 1937; 4624, 1938; 4654, 1917; 4665, 1924; Mindanao, 1:178,000, U.S.N.C., 1937. Progressive Military Map of the Philippine Islands, 1:62,500. C.E. Nos. 126 & 152, 1907. Philippine Islands, 1:600,000 USC&GS, No. 50, 1941. Vols. I & V, Commission of the Census, Commonwealth of the Philippines, 1940. Intelligence data, 1943. Roads from: Mobilgas Road Map of the Philippines, 1:1,100,000, Standard Vacuum Oil Co., P. I., 1941; Philippine Islands, 1:600,000, USC&GS, No. 50, 1941. Official Road Map of the Philippines, 1:500,000, Bur. Pub. Works, Nos. 10 & 11, 1941; Tel. & Tel. from: Communication Map of the Philippines, 1:500,000, Bur. Pub. Works, Nos. 15-2 & CM 15-3, 1931 (corrected to 1940, AMS). P. I., 1:400,000, Hq. Mil. Int., Phil. Dept., Nos. CM 15-2 & CM 15-3, 1931 (corrected to 1940, AMS). Transmission lines from: Philippine Islands, 1:1,000,000, No. 100, 1933.

CONVERSION GRAPH NOT to the scale of the Map

LEGEND

- Road, surfaced, all weather
- Road, partially surfaced, generally all weather
- Track, Trail
- Road under construction, 1941
- Boundary, International Treaty Limits
- Boundary, Provincial
- Boundary, Chartered City
- Railroad, 3'6" Gauge, with Station
- Railroad, Less than 3'6" Gauge
- Railroad, Electric
- Telephone and Telegraph Line
- Power Transmission Line
- City, First Importance ... MANILA
- City, Second Importance ... DAVAO
- City or Large Town ... Tagum
- Small Town ... Pina
- Village or Settlement ... Kalao
- Aerodrome, Auxiliary Landing Field
- Seaplane Base, Auxiliary Anchorage
- Principal Navigation Light
- Radio Station
- Telephone Station, Telegraph Station
- Mud Flat, Tidal Flat
- Mangrove

COASTAL AREAS OF MOST FAVORABLE BEACHES
COASTAL AREAS OF FAVORABLE BEACHES
COASTAL AREAS OF LEAST FAVORABLE BEACHES
F(b) See Text — LANDING AREAS

NOTE: AFFIXED USING THIS MAP WILL HAVE ARMOR CORRECTIONS AND ADDITIONS MADE FROM TIME TO TIME. ATTENTION ART. WAR DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

FIFTY THOUSAND YARD PHILIPPINE POLYCONIC GRID. THE LAST THREE DIGITS OF THE GRID NUMBERS ARE OMITTED

COVERAGE DIAGRAM

INDEX TO BOUNDARIES PROVINCES

INDEX TO ADJOINING SHEETS

1. USC&GS Charts (Reliable Surveys). 2. Sectional Aero Chart, 1:600,000 (Compiled Map, Relibility Poor). 3. P.I. Bureau Forests, USC&GS, 1:500,000 (Compiled Map, Reliability Poor).

1 — DANSALAN CITY

Broken shorelines indicate mangrove

DAVAO, PHILIPPINE ISLANDS
N600-E12400/200

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON 25, D. C. 112105 8-44

OVERPRINTED COMPILED BY BEACH EROSION BOARD CORPS OF ENGINEERS, U. S. ARMY

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HEIGHTS IN FEET AND DEPTHS IN FATHOMS

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PLAN NO. 29
JANIS 155
NB 51-6

PHILIPPINE ISLANDS 1:500,000

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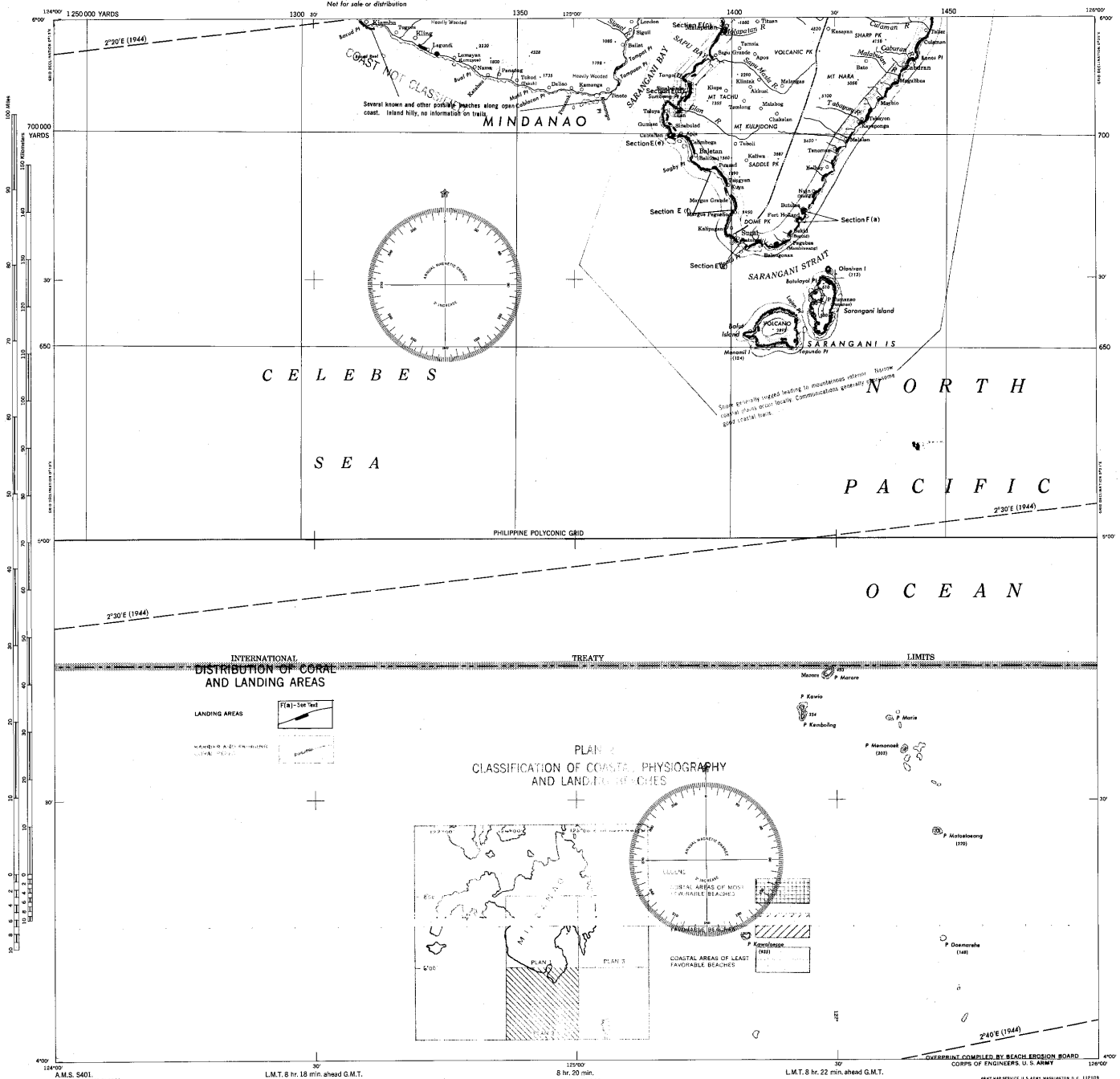
BATULAKI

SECOND EDITION - AMS 2



L.M.T. 8 hr. 18 min. ahead G.M.T. | 8 hr. 20 min. | L.M.T. 8 hr. 22 min. ahead G.M.T.

Scale 1:500,000

POLYCONIC PROJECTION

FIFTY THOUSAND YARD PHILIPPINE POLYCONIC GRID

GRID DEC FOR THE CENTER OF THE PHILIPPINE ZONE AREA

APPROXIMATE MEAN DECLINATION 1944 FOR CENTER OF SHEET. ANNUAL MAGNETIC CHANGE 9' INCREASE

Do not use diagram except to obtain numerical values of angles

OVERPRINT COMPILED BY BEACH EROSION BOARD CORPS OF ENGINEERS, U. S. ARMY

A.M.S. 5401.
First Edition (AMS 1) 1943.
Second Edition (AMS 2) 1944.
Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service (AMS), U. S. Army, Washington, D. C., 1944.
Compiled from Sectional Aeronautical Chart, 1:500,000, USC&GS, No. 3, 1941, USC&GS Charts 4507, 1937; 4508, 1937. Netherlands East Indies Hydrographic Chart No. 185, 1935. Philippine Islands, 1:600,000, USC&GS, No. 50, 1941. Volumes I & V, Commission of the Census, Commonwealth of the Philippines, 1940, Intelligence Data, 1943. Roads from Mobilgil Road Map of the Philippines, 1:1,100,000, Standard Vacuum Oil Co., Philippine Islands, 1941. Official Road Map of the Philippines, 1:500,000, Bureau of Public Works, No. 11, 1941. Telegraph & Telephone from Communication Map of the Philippine Islands, 1:400,000. Headquarters Military Intelligence, Philippine Department, No. CM 15-3, 1931, (Corrected to 1940, AMS).

CONVERSION GRAPH NOT at the scale of the map.

LEGEND

Road, surfaced, all-weather
Road, partially surfaced, generally all-weather
Track, Trail
Road under construction, 1941
Boundary, International Treaty Limits
Boundary, Provincial
Boundary, Chartered City
Railroad, 3'6" gauge; with Station
Railroad, Less than 3'6" gauge
ELECTRIFIED
Railroad, Electric
Telephone and Telegraph Line
Power Transmission Line

City, First Importance ... MANILA
City, Second Importance ... DAVAO
City or Large Town ... Tagum
Small Town ... Pina
Village or Settlement ... Kalan
Aerodrome, Auxiliary Landing Field
Seaplane Base, Auxiliary Anchorage
Principal Navigation Light
Radio Station ... RSO
Telephone Station, Telegraph Station
Mud Flat, Tidal Flat
Mangrove

COVERAGE DIAGRAM

INDEX TO BOUNDARIES

INDEX TO ADJOINING SHEETS

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON D. C., 1942

1. Netherlands Hydrographic Chart 185, 1935
2. USC&GS Charts Variable Survey
3. Sectional Aeronautical Chart 1:500,000 (Colored Map, Skeleton)

CONFIDENTIAL

HEIGHTS IN FEET AND DEPTHS IN FATHOMS

BATULAKI, PHILIPPINE ISLANDS
N400-E12400/200

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

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PLAN NO. 30
JANIS 155
NB 52-I

PHILIPPINE ISLANDS 1:500,000

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CAPE SAN AGUSTIN

SECOND EDITION - AMS 2

Sand beach at town of Cateel near river mouth. Roads and trails radiate inland and along coast.

Scattered beaches along bay shores. Inland generally rugged. Trail along coast connects landing areas.

INTERNATIONAL TREATY LIMITS

PHILIPPINE POLYCONIC GRID BAND 11th ZONE "C"

2°10'E (1944)

2°20'E (1944)

N O R T H

P A C I F I C

O C E A N

U N E X P L O R E D

MINDANAO

DAVAO GULF

Section H (a)
Section H (b)
Section H (c)
Section H (d)
Section H (e)
Section H (f)
Section H (k)
Section H (l)
Section H (m)
Section H (n)
Section H (o)
Section H (p)
Section E (w)

DISTRIBUTION OF CORAL AND LANDING AREAS

LANDING AREAS

H(a)-Sea Test

750 000 YARDS

1 500 000 YARDS

1 000 000 YARDS

A.M.S. S401

First Edition (AMS 1) 1943.
Second Edition (AMS 2) 1944.
Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service (AM), U. S. Army, Washington, D. C., 1944. Compiled from Sec. Aero. Chart, 1:500,000, USC&GS, No. 3, 1941; USC&GS Charts 4606, 1937; 4625, 1914; 4626, 1915; 4627, 1915; Philippine Islands, 1:600,000, USC&GS, No. 50, 1941; Vols. I and V, Commonwealth of the Philippines, 1940; Intelligence Data, 1943. Roads from Motricit Road Map of the Philippines, 1:3,000,000, Standard Vacuum Oil Co., P. I., 1941; Philippine Islands, 1:600,000, USC&GS, No. 50, 1941; Tel. and Tel. from Communication Map of the P. I., 1:400,000, Hq. Mil. Int., Phil. Dept. No. CM 15-3, 1931. (Corrected to 1940 AMS).

CONVERSION GRAPH. NOT at the scale of the map.

LEGEND

Road, surfaced, all-weather
Road, partially surfaced, generally all-weather
Track, Trail
Road under construction, 1941
Boundary, International Treaty Limits
Boundary, Provincial
Boundary, Chartered City
Railroad, 3'6" Gauge; with Station
Railroad, Less than 3'6" Gauge
Railroad, Electric
Telephone and Telegraph Line
Power Transmission Line

City, First Importance — MANILA
City, Second Importance — DAVAO
City or Large Town — Tagum
Small Town — Pina
Village or Settlement — Kalan
Aerodrome, Auxiliary Landing Field
Seaplane Base, Auxiliary Anchorage
Principal Navigation Light
Radio Station
Telephone Station, Telegraph Station
Med Flat, Tidal Flat
Mangrove

L.M.T. 8 hr. 26 min. ahead G.M.T.

L.M.T. 8 hr. 28 min. ahead G.M.T.

L.M.T. 8 hr. 30 min. ahead G.M.T.

Scale 1:500,000

10 8 6 4 2 0 10 20 Miles
10 0 10 20 30 Kilometers
10000 0 10000 20000 30000 Yards

CONTOUR INTERVAL 500 FEET

POLYCONIC PROJECTION

FIFTY THOUSAND YARD PHILIPPINE POLYCONIC GRID

FIFTY-THOUSAND-YARD WORLD POLYCONIC GRID BAND IN ZONE "C"

GRID DEC. FOR THE CENTER OF THE PHILIPPINE ZONE C AREA=9°51'E OR 10 MILS

DIVERGENCE 1.0 FOR CENTER OF THE ZONE C AREA (Chart 5 for 1 Mil.)

APPROXIMATE MEAN DECLINATION 1944 FOR CENTER OF SHEET ANNUAL MAGNETIC CHANGE 09' INCREASE

Do not use diagram except to obtain numerical values of angles

NOTE: GEOGRAPHIC NAMES THIS MAP FOLLOW NAMES APPROVED AND ADOPTED WHICH COME TO THEIR ATTENTION AND WHICH SUBJECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

OVERPRINT COMPILED BY BEACH EROSION BOARD CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 11 2 1944

5-44

COVERAGE DIAGRAM

1. U.S.C.&G.S. Charts-Various scales (Survey reliable)
2. Philippine Islands, 1:600,000 (Compiled map available)
3. Sectional Aero. Chart 1:500,000 (Compiled map available)

INDEX TO BOUNDARIES

PROVINCES
1. SURIGAO
2. DAVAO

INDEX TO ADJOINING SHEETS

NB 51-6 | NB 52-4 | NB 51-5 | NB 52-1 | NB 51-8 | NB 52-5

Broken shore lines indicate mangrove

CONFIDENTIAL

HEIGHTS IN FEET AND DEPTHS IN FATHOMS

CAPE SAN AGUSTIN, PHILIPPINE ISLANDS
N600-E12600/200

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PHILIPPINE ISLANDS

SOUTHEAST COAST OF MINDANAO

TALOMO BAY

Scale 1:30,000

Surveyed in 1907

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

Nautical Mile

Yards

To Davao

TALOMO

Talomo R.

Matina R.

Ohta Development Co.

Warehouse

Church

MATINA

DUMUY PT.

Talomo Bay

DUMALAG

DUMALAG PT.

VARN 2°15' E IN 1944
ANNUAL INCREASE 7'

PHILIPPINE ISLANDS

SOUTHEAST COAST OF MINDANAO

PAKIPUTAN STRAIT

Scale 1: 20,000

Surveyed in 1930 and 1940

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

Not to be used for Navigational purposes

NOTE:
Currents in Pakiputan Strait run about 2½ kn. northward with flood and southward with ebb. The current is reported at times to set southward both with rising and falling tides.

MINDANAO ISLAND

SAMAL ISLAND

Pakiputan Strait

Nautical Mile

Meters

Yards

To Davao

86m surfaced runway

Landing field

IPIL

Boulevard

Municipal Railway

SANTA ANA
(Port for Davao)

Uyanguran Street

To Davao

Davao R.

Pandean R.

PAGAMIKAN

TADANG

LANANG PT.

Asiatic Petroleum Co.

LINAO PT.

heavily wooded

POHUN PT.

VARN 2°15' E IN 1944
ANNUAL INCREASE 7'

SOURCE: U.S. [illegible]

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

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Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PHILIPPINE ISLANDS 1:500,000

For use by War and Navy Department Agencies only
Not for sale or distribution

LIANGA

FIRST EDITION-AMS 1

NC 52-4

SIARGAO ISLAND (SURIGAO PROV)

DISTRIBUTION OF CORAL AND LANDING AREAS

LANDING AREAS

N O R T H

P A C I F I C

O C E A N

S U R I G A O

M I N D A N A O

A G U S A N

LANUZA BAY

LIANGA BAY

DIUATA MOUNTAINS

Interrupted beach along bay shore. Backed by low Aupui ground with tidal streams. Trails inland to highway.

Extensive sand beach backed by low river plain. Road parallels north half.

Several bayhead beaches, best landing at Lianga. Inland locally hilly. Road leads southward from Lianga.

Small beaches at bayheads backed by lowlands. Beaches connected by trail; road leads northwestward.

Small beach along fringing coral reef. Trail parallels shore one mile inland.

8 h 26 m

8 h 28 m LMT, ahead of GMT

8 h 30 m

PHILIPPINE ZONE BAND III, ZONE "C"

Grid Declination 0°42'E

1°40'E (1942)

1°50'E (1942)

OVERPRINT COMPILED BY BEACH EROSION BOARD CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 1/12/43

A. M. S. S401

LEGEND

- Administrative Cities
- Population over 100,000 — REDON
- Population 25,000 to 100,000 — REDONDIN
- Population 10,000 to 25,000 — Redondinha
- Population 5,000 to 10,000 — Redondinha
- Population 1,000 to 5,000 — Redondisle
- Population less than 1,000 — Redondisvie
- Roads: 1st class
- Roads: 2nd class
- Roads: 3rd class
- Roads: 4th class
- Trails
- Railroads: Broad Gauge
- Railroads: Narrow Gauge
- Railroads: Standard Gauge
- Railroads: Electric

- Boundaries: International
- Boundaries: International indefinite
- Boundaries: Intercolonial
- Boundaries: State, Province or Colony
- Lines of Equal Magnetic Declination
- Transmission Line
- Lighting Facilities at Field — LF
- Radio Station, Radio Beacon, Radio Direction Finder Station (with descriptive notes)
- Telephone Station — P
- Telephone and Telegraph Station — PT
- Located Object (with descriptive notes)
- Spot Elevations (Natural Features) in feet — 2479
- Spot Elevations (Cultural Features) in feet — 1525
- Government, Army, Navy — Field / Anchorage
- Municipal or Commercial
- Auxiliary or Emergency

1600 1000000 1550 1050 1100

Scale 1:500,000

10 8 6 4 2 0 10 20 30 Miles

10 8 6 4 2 0 10 20 30 40 50 Kilometers

30000 0 10000 20000 30000 40000 50000 Yards

Polyconic Projection

Prepared under the direction of the Chief of Engineers, U. S. Army, Washington, D. C. Compiled by the Army Map Service from the following sources:
USC&GS Charts 4603, 4627, 4628, 4629 - USC&GS Topographic Map No. 5C - Bureau of Public Works Road Map No. 10 - Commission of the Census Atlas Vols. I. & 5 - Communications Map C.M. 15 and USC&GS Aeronautical Chart No. 3.

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 1° INCREASE

FIFTY THOUSAND YARD PHILIPPINE ZONE GRID
THE LAST THREE DIGITS OF THE GRID NUMBERS ARE OMITTED

CONVERSION TABLE

Meters	Feet
2,500	8,000
2,000	7,000
1,500	6,000
1,000	5,000
500	4,000
0	3,000
	2,000
	1,000
	0

SHEET INDEX

LIANGA

N800-E12600/200

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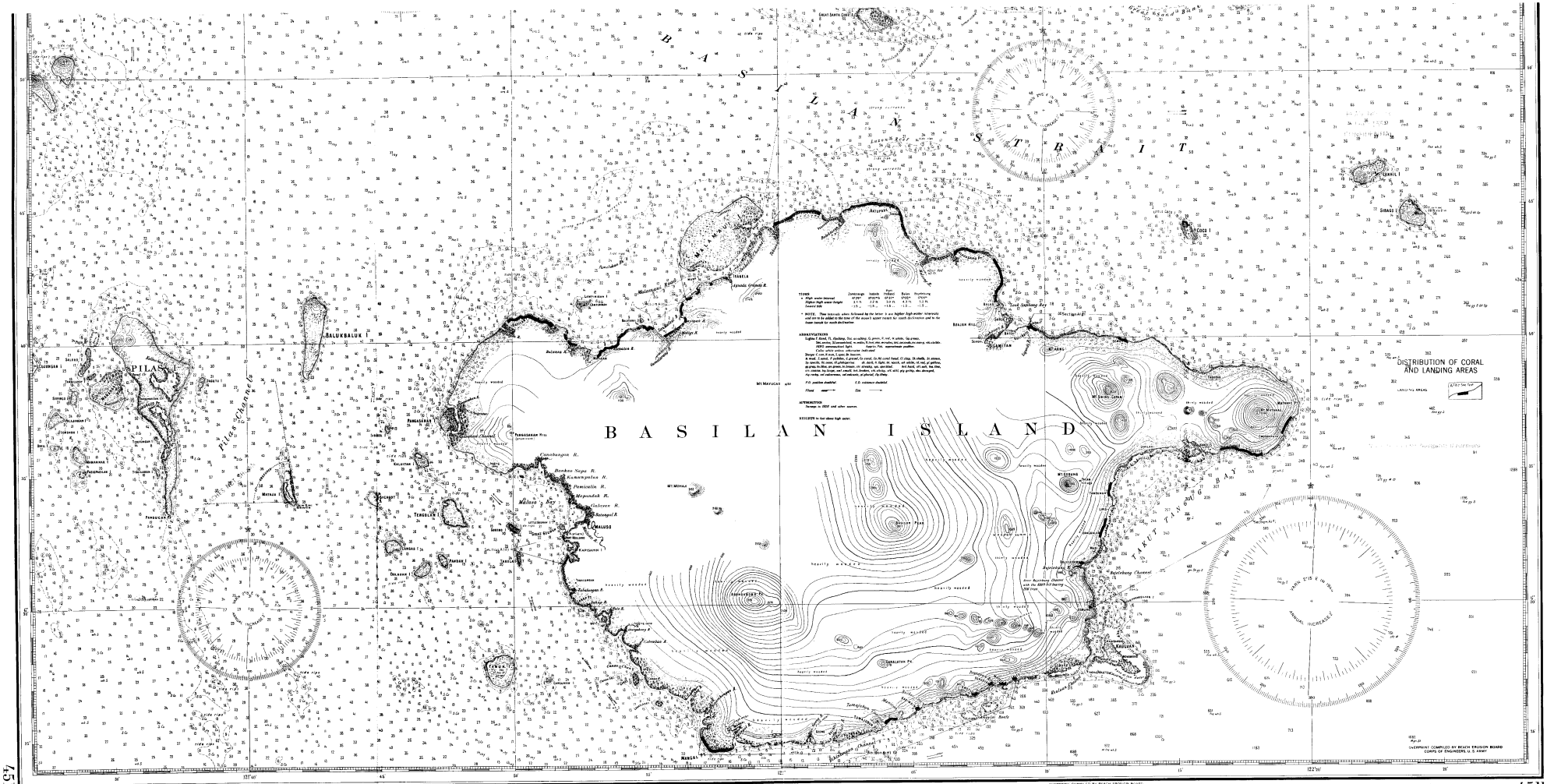
BASILAN ISLAND
BASILAN STRAIT
PILAS I.
SALUKBALUK I.
Pilas Channel
Malusu Bay
Tabiawan Bay
Tabiawan Pt.
Tabiawan Channel
Tabiawan Reef
Tabiawan Shoal
Tabiawan Rock
Tabiawan Patch
Tabiawan Bank
Tabiawan Ridge
Tabiawan Valley
Tabiawan Basin
Tabiawan Trough
Tabiawan Canyon
Tabiawan Gap
Tabiawan Pass
Tabiawan Strait
Tabiawan Sound
Tabiawan Bay
Tabiawan Point
Tabiawan Island

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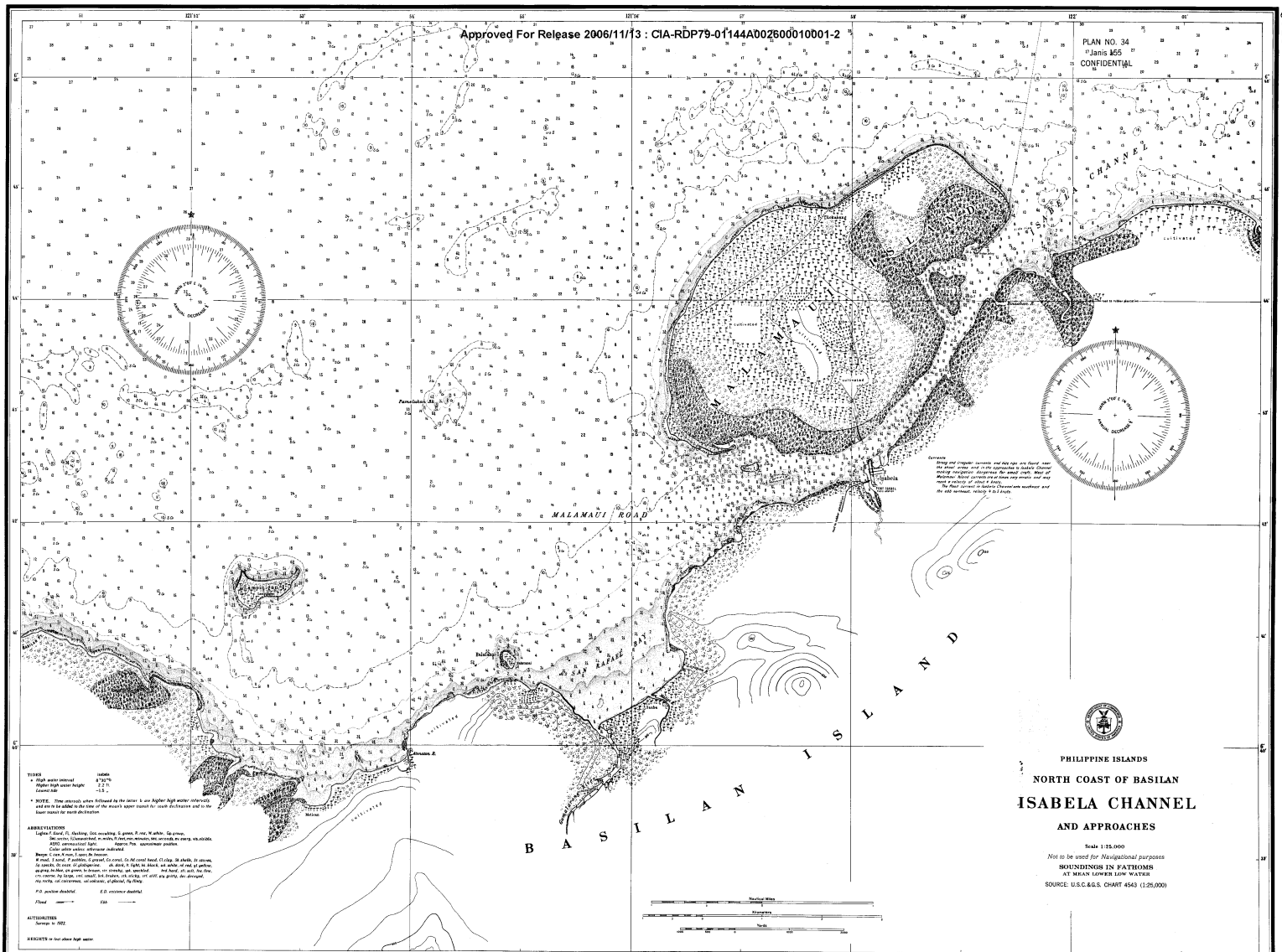
PLAN NO. 34
17 Janis 155
CONFIDENTIAL

4543


ISABELA CHANNEL
MALAMAUI ISLAND
MALAMAUI ROAD
BASILAN ISLAND
Isabela
Malamaui
Panuluhan
Pulauan
Malinsuan R.
Malinsuan
Tabuan
Tabuan Reef
Tabuan Shoal
Currents
Strong and irregular currents and tide rips are found near the shoal areas and in the approaches to Isabela Channel making navigation dangerous for small craft. West of Malamaui Island currents are of lesser very erratic and may run in any direction.
The prevailing direction of these currents in Isabela Channel are northeast and the ebb northeast, velocity 4 to 5 knots.
Nautical Miles
Kilometers
Yards

TIDES — Isabela
High water interval — 8h 22m
Higher high water height — 2.2 ft.
Lowest tide — -1.5 ft.

* NOTE. Time intervals when followed by the letter 'L' are higher high water intervals, and are to be added to the time of the moon's upper transit for south declination and to the lower transit for north declination

ABBREVIATIONS

Lights-F. fixed, Fl. flashing, Occ. occulting, G. green, R. red, W. white, Gp. group, Sec. secs., U. Unwatched, m. miles, ft. feet, min. minutes, sec. seconds, ev. every, vis. visible. MDO. aeronautical light. Approx. Pos. approximate position. Color white unless otherwise indicated.

Bottom: C. can, K. mun, S. spec, Bo. bowder, M. mud, S. sand, P. pebbles, G. gravel, Co. coral, Co. Rd. coral head, Cl. clay, Sh. shells, St. stones, Sy. specks, Or. ooze, Gl. globigerine, ch. dark, lt. light, bk. black, wh. white, rd. red, yl. yellow, gn. grey, bu. blue, gn. green, br. brown, cr. streaky, spt. speckled, hd. hard, sft. soft, fne. fine, crs. coarse, lg. large, sml. small, brk. broken, stk. sticky, vrt. wtd, any glutny, dec. decayed, rky. rocky, cal. calcareous, sil. siliceous, gl. glacial, fly. flinty.

P.D. position doubtful. E.D. existence doubtful.

Flood ——→ Ebb ——→

AUTHORITIES
Surveys to 1912.

HEIGHTS in feet above high water.

PHILIPPINE ISLANDS

NORTH COAST OF BASILAN

ISABELA CHANNEL

AND APPROACHES

Scale 1:25,000

Not to be used for Navigational purposes

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

SOURCE: U.S.C.&G.S. CHART 4543 (1:25,000)

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

Published at Manila, P.I., May 1945
BY THE U.S. COAST AND GEODETIC SURVEY
Reissued April, 1945

LIGHTS, BEACONS, BUOYS, AND DANGERS CORRECTED FOR INFORMATION RECEIVED TO DATE OF ISSUE

(Isabela Channel) U.S.C.&G.S. 4543

4543

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PHILIPPINE ISLANDS

EAST COAST OF BASILAN

BOJELEBUNG AND KAULUAN CHANNELS

Scale 1:15,000

Surveyed 1924

Soundings in fathoms at mean lower low water

H.O. CHART NO. 35
Janis 155
CONFIDENTIAL

Not to be used for Navigational purposes

BOJELEBUNG

Bojelebung R.

Bojelebung Channel

680 ft hill bears 288° true

cultivated

cultivated

cogon grass

UGBUNG

TARIPAMASILAAN I

bare at low water

Lamitan Channel

HALUBANGAO

mangrove

KAULUAN ISLAND

VISAYA

MONOMENG

mangrove swamp

mangrove

bare at low water

Nautical Miles

Meters

Yards

SOURCE: U.S.C.&G.S. CHART 4540 (1:15,000)

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

Published at Manila, P.I. Aug. 1927, reissued Aug. 1936
BY THE U.S. COAST AND GEODETIC SURVEY
Reissued at Washington, D.C. May 1942
L. O. Colbert, Director

(16 charts, 2 sheets)

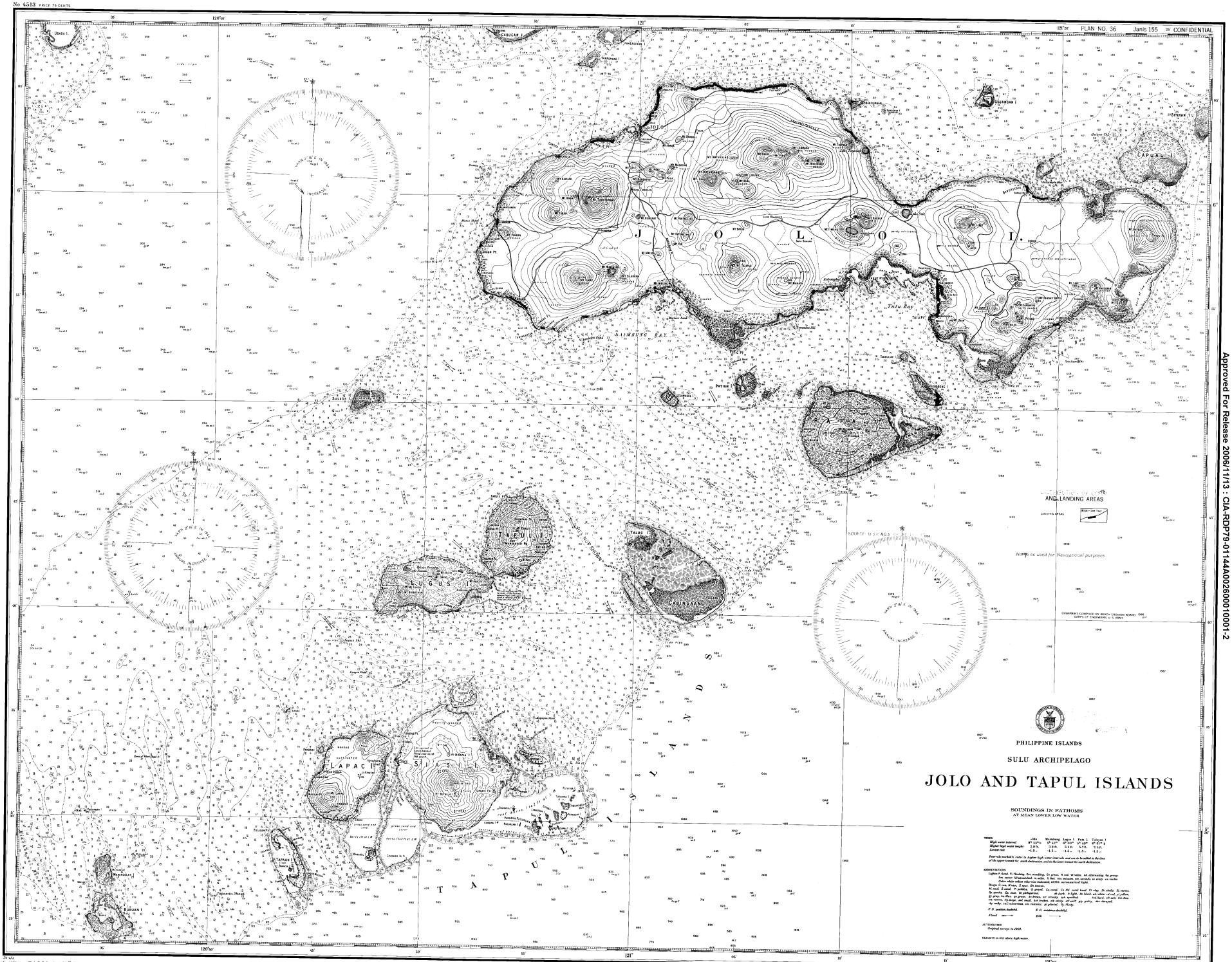
U.S.C. & G.S. 4540

PRICE 50 CENTS

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

No 4513 PRICE 75 CENTS

PLAN NO. 36 Janis 155 CONFIDENTIAL



PHILIPPINE ISLANDS

SULU ARCHIPELAGO

JOLO AND TAPUL ISLANDS

SOUNDINGS IN FATHOMS
AT MEAN LOWER LOW WATER

TIDES	Jolo	Maimbung	Lapac I.	Pass S.	Tubigan I.
	6° 03'N.	5° 57'N.	6° 05'N.	5° 59'N.	6° 01'N.
	121° 00'E.	120° 52'E.	120° 58'E.	121° 03'E.	121° 01'E.
High water interval	2 h.	10 h.	3 h.	3 h.	5 h.
Higher high water height above datum of soundings	1.5 ft.	1.5 ft.	1.5 ft.	1.5 ft.	1.5 ft.
Lower high	-1.5 -	-1.5 -	-1.5 -	-1.5 -	-1.5 -

Asterisk marked h. refer to higher high water intervals and are to be added to the time of the upper transit for south declination, and to the lower transit for north declination.

ABBREVIATIONS

Lights: R. red. Fl. flashing. Gru. occulting. Gr. green. R. red. W. white. Alt. alternating. Gp. group. Int. intervening. Obscured. Vis. visible. R. Bea. fixed beacon. occ. occasional. ex. except. vis. visible. Color: white unless otherwise stated. AERO. aeronautical light.

Bcn. beacon. C. sand. M. mud. S. coral. Pt. pebbles. G. gravel. Co. coral. Cy. M. clay. M. shells. Sy. stones. Sp. spongy. Co. mar. M. globigerina. M. shells. Sy. stones. Sp. spongy. Co. mar. M. globigerina. dk shell. h. lights. bk black. wh white. rd red. y yellow. gn green. bu blue. gr. grown. br brown. sy. streaky. sch. speckled. hrd hard. sft soft. fine fine. crs coarse. med medium. grn. gritty. stf stiff. grs grassy. dec. decayed. sig. roughly. coll. calcareous. vol. volcanic. gl. glauconi. Sy. Clayey.

P. D. position doubtful. E. D. existence doubtful.

Flood ⟶ Ebb ⟵

AUTHORITIES
Original surveys to 1933.

HEIGHTS in feet above high water.

Published at Washington, D.C., June 1944
BY THE U.S. COAST AND GEODETIC SURVEY
Leonard M. Wainstein, D.C. Mar. 1944
E. H. Gilbert, Director

LIGHTS, BEACONS, BUOYS AND DANGERS CORRECTED
FOR INFORMATION RECEIVED TO DATE OF ISSUE

(Jolo and Tapul Islands) U.S.C.&G.S. 4513

PRICE 75 CENTS

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

CONFIDENTIAL
Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PLAN NO. 37
JANIS 155
NB 51-4

PHILIPPINE ISLANDS 1:500,000

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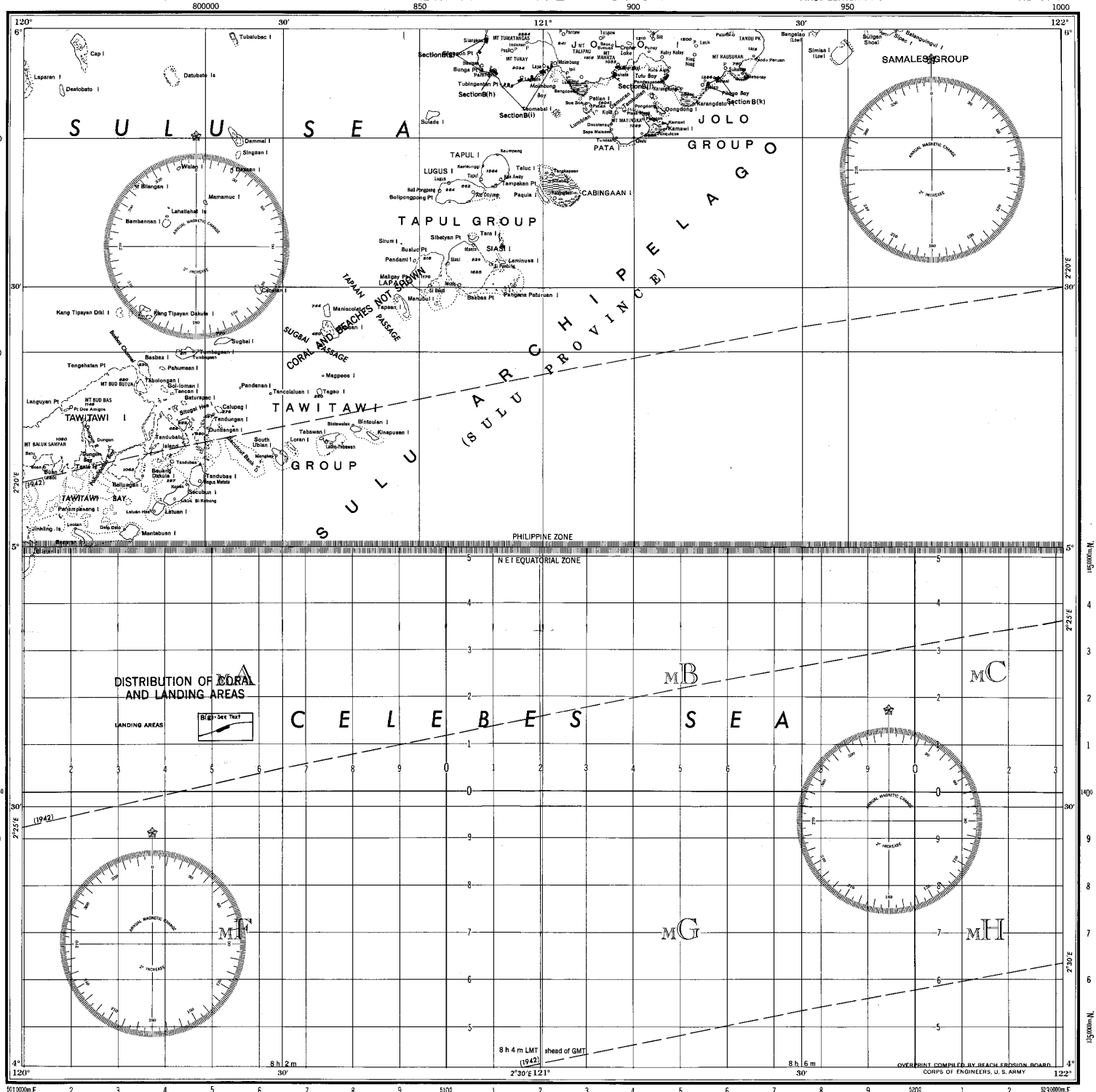
TAWITAWI GROUP

FIRST EDITION-AMS 1



OVERPRINT COMPILED BY BEACH EROSION BOARD, CORPS OF ENGINEERS, U. S. ARMY

A. M. S. S401

LEGEND

- Administrative Cities
- Population over 100,000
- Population 25,000 to 100,000
- Population 10,000 to 25,000
- Population 5,000 to 10,000
- Population 1,000 to 5,000
- Population less than 1,000
- Roads: 1st class
- Roads: 2nd class
- Roads: 3rd class
- Roads: 4th class
- Trails
- Railroads: Broad Gauge
- Railroads: Narrow Gauge
- Railroads: Standard Gauge
- Railroads: Electric
- REDON
- REDONDIN
- Redondinha
- Redondinha
- Redondinha
- Redondinha
- Boundaries: International
- Boundaries: International Indefinite
- Boundaries: Intercolonial
- Boundaries: State, Province or Colony
- Lines of Equal Magnetic Declination 2°20'E
- Transmission Line
- Lighting Facilities at Field
- Radio Station, Radio Beacon, (with descriptive notes)
- Radio Direction Finder Station
- Telephone Station
- Telephone and Telegraph Station
- Located Object (with descriptive notes)
- Spot Elevations (Natural Features) in feet
- Spot Elevations (Cultural Features) in feet — Field / Anchorage
- Government, Army, Navy
- Municipal or Commercial
- Auxiliary or Emergency

Scale 1:500,000

10 8 6 4 2 0 10 20 30 Miles
10 8 6 4 2 0 10 20 30 40 50 Kilometers
10000 0 10000 20000 30000 40000 50000 Yards

Polyconic Projection

Prepared under the direction of the Chief of Engineers, U. S. Army, Washington, D. C. Compiled by the Army Map Service from the following sources: USC&GS Charts 4512, 4513, 4514, 4516, 4544, 4722 - Bureau of Public Works Road Map No. 13 - Commission of the Census Atlas Vols. 1 and 5 - Communications Map C. M. 16 and USC&GS Aeronautical Chart No. 4

APPROXIMATE MEAN DECLINATION 1942
ANNUAL MAGNETIC CHANGE 3'INCREASE

FIFTY THOUSAND YARD PHILIPPINE ZONE GRID
THE LAST THREE DIGITS OF THE GRID NUMBERS ARE OMITTED

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North

TO GIVE A GRID REFERENCE ON THIS SHEET
LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, etc.
USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz.

POINT	LETTERS
East	North
Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map. *Estimate tenths Eastwards*	Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map. *Estimate tenths Northwards*
East	North
REFERENCE	To nearest 1,000 metres
Grid Square	Meters 10,000 Meters

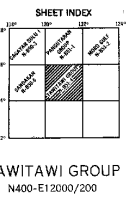
Magnetic Declination from Grid North for center of sheet is 2°23'E

CONVERSION TABLE

Meters	Feet
2,500	9,000
	8,000
	7,000
	6,000
2,000	5,000
	4,000
1,500	3,000
1,000	2,000
500	1,000
0	0

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. - 112108
Rev'd 1943

SHEET INDEX



TAWITAWI GROUP
N400-E12000/200

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2
CONFIDENTIAL

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PHILIPPINE ISLANDS

ANCHORAGES IN JOLO ISLAND

No. 4541 PRICE 50 CENTS

PLAN NO. 38 Janis 155 CONFIDENTIAL

ABBREVIATIONS

Lights-F. fixed, Fl., flashing, Occ. occulting, G. green, R. red, W. white, Gp. group, Sec. sector, Uncovers(ed), m. miles, ft. feet, min. minutes, sec. seconds, ex. every, vis. visible. AERO. aeronautical light. Approx. Pos. approximate position. Colour where unless otherwise indicated.

Bottom. C. sand, S. mud, P. pebbles, G. gravel, Co. coral, Co. Rd. coral head, Cl. clay, Sh. shells, St. stones, Sn. smooth, Sh. rocks, Gl. globigerina. dk. dark, fr. light, bl. black, wh. white, rd. red, yl. yellow, gy. grey, bu. blue, gn. green, br. brown, str. streaky, spt. speckled. hrd. hard, stf. stiff, fne. fine, crs. coarse, lrg. large, sml. small, brk. broken, sft. sticky, stf. stiff, gty. gritty, etc. decayed, rky. rocky, cal. calcareous, vol. volcanic, gl. glacial, fly. flowy.

P.D. position doubtful. E.D. existence doubtful.

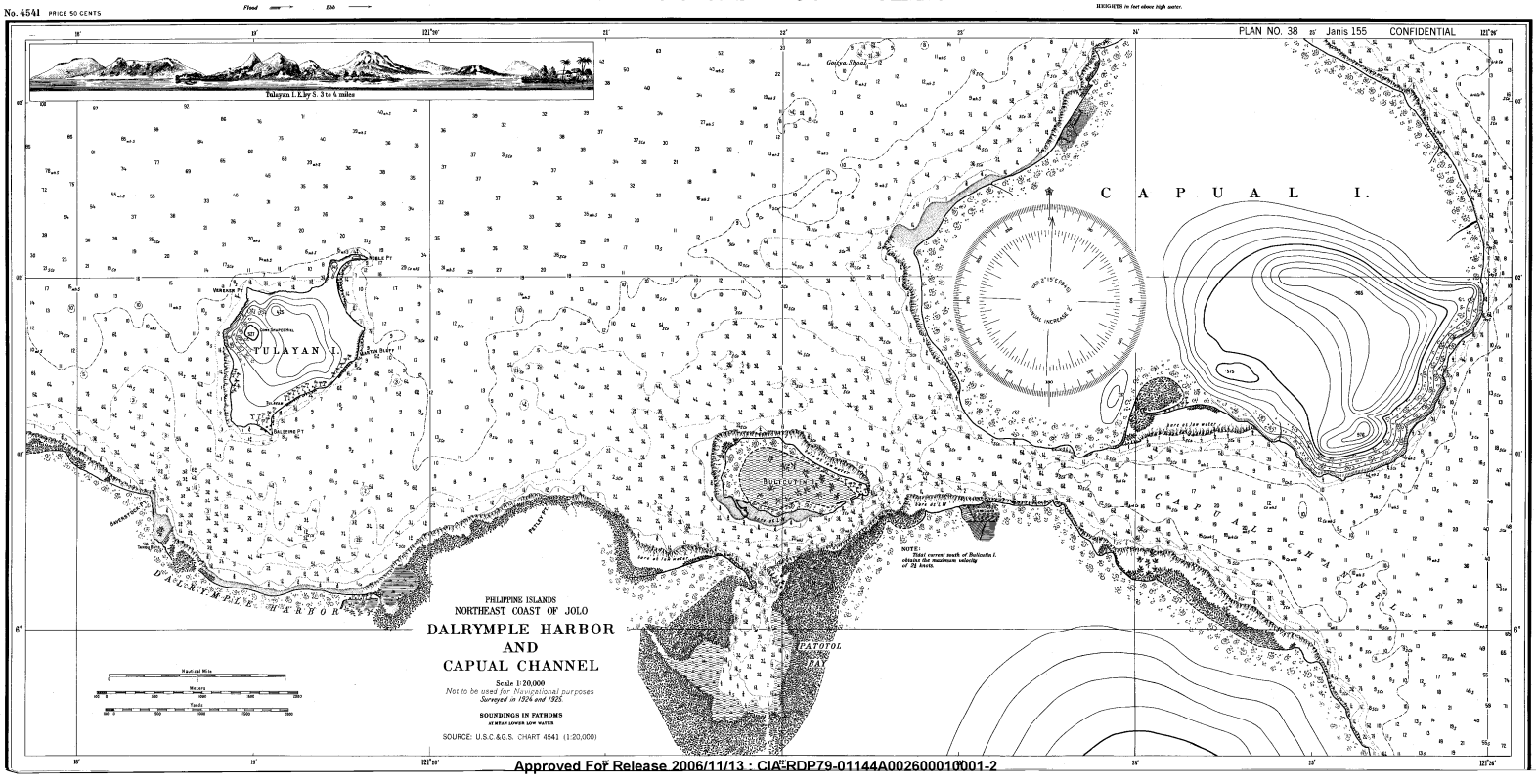
Flood ⟶ Ebb ⟶

TIDES

	Jolo	Maimbung	Tulayan I.	Capual I.
* High water interval	6h 25m S	5h 42m	6h 31m S	5h 37m
Higher high water height	2.8 ft.	3.9 ft.	2.4 ft.	4.9 ft.
Lowest tide	-1.5 ..	-1.5 ..	-1.5 ..	-1.5 ..

* NOTE. Time intervals when followed by the letter S are higher high water intervals and are to be added to the time of the moon's upper transit for south declination and to the lower transit for north declination.

HEIGHTS in feet above high water.



PHILIPPINE ISLANDS
NORTHEAST COAST OF JOLO

DALRYMPLE HARBOR AND CAPUAL CHANNEL

Scale 1:20,000

Not to be used for Navigational purposes
Surveyed in 1924 and 1925.

SOUNDINGS IN FATHOMS
at MEAN LOWER LOW WATER

SOURCE: U.S.C.&G.S. CHART 4541 (1:20,000)

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

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EASTERN ASIA 1:1,000,000

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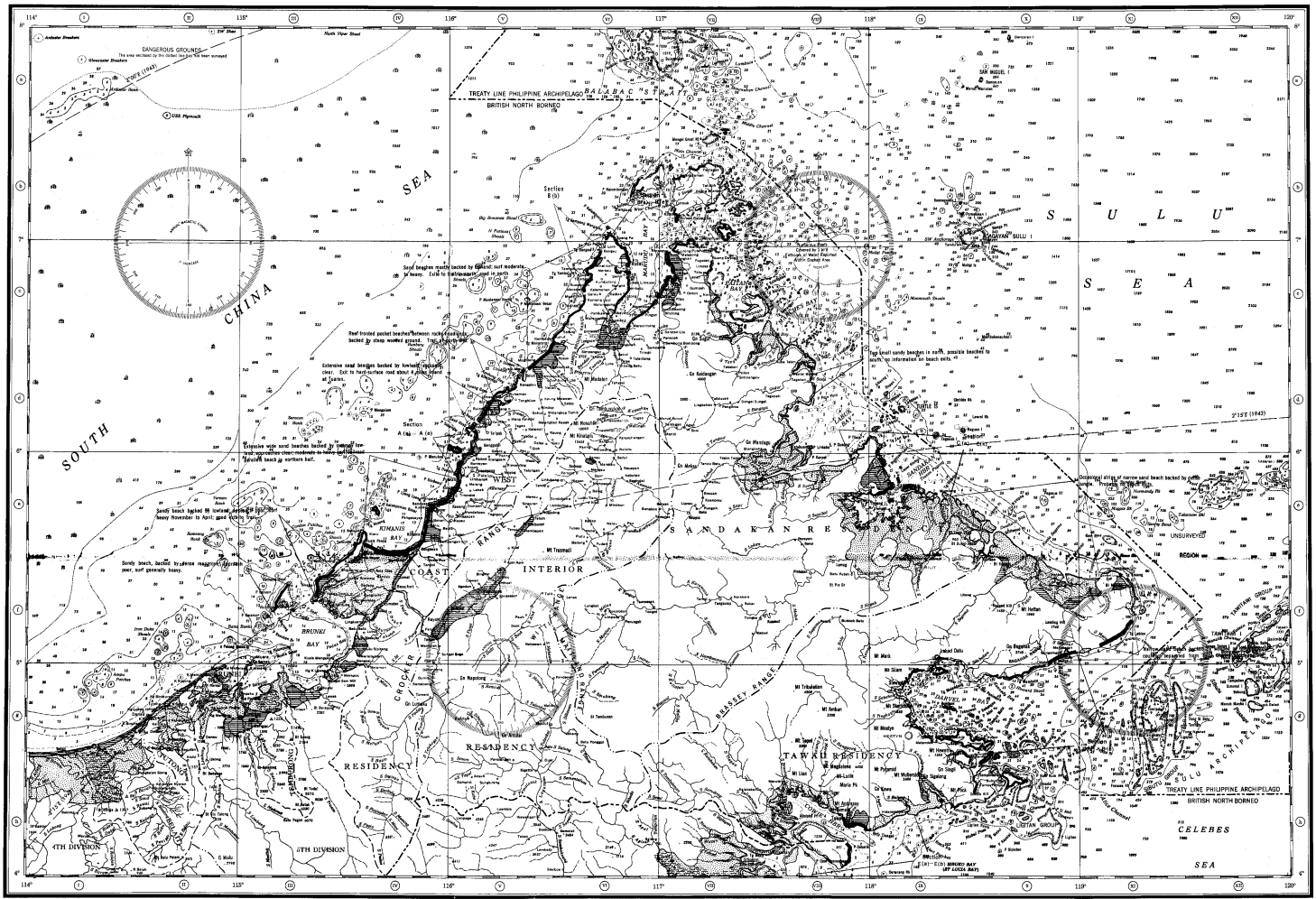
NORTH BORNEO

FIRST EDITION- AMS 3

PLAN NO. 39
JANIS 155
NB 50


SOUTH CHINA SEA
SULU SEA
SULU ARCHIPELAGO
CELEBES SEA
TREATY LINE PHILIPPINE ARCHIPELAGO
BRITISH NORTH BORNEO
RAJAH'S POINT
SAN MIGUEL I.
SULU I.
TAWAU RESIDENCY
SANDAKAN RESIDENCY
WEST COAST RESIDENCY
INTERIOR RESIDENCY
4TH DIVISION
5TH DIVISION
UNSURVEYED REGION
DANGEROUS GROUNDS
Gloucester Breakers
Ambalat Breakers
Section A (a) - A (e)
Section B (b)
Extensive wide sand beaches backed by forested low-lying coast with clear-moderate-to-hazy sky. Extensive beach at northern bait.
Extensive sand beaches backed by lowland forested clear. Exit to hard-surface road about 4 miles inland at Tawau.
Reef-fronted pocket beaches between rocky headlands backed by steep wooded ground. Trail exits into clear.
Sandy beach, backed by dense mangrove thicket, poor surf generally heavy.
Sandy beach backed by lowland forested clear. Surf heavy November to April and North Pahang.
Top small sandy beaches in north, possible beaches to south, no information on beach exits.
Occasional strips of narrow sand beach backed by jungle.
Sandy beach backed by lowland forested clear. Surf heavy November to April and North Pahang.
Mt Kinabalu
Mt Trusmadi
Mt Tambuan
Mt Tibabatan
Mt Ambun
Mt Meatye
Mt Pilyandi
Mt Wullersdorf
Mt Lucia
Mt Lias
Mt Kiau
Mt Main
Mt Silam
Mt Hatton
Mt Magdalena
Mt Lucia
Mt Kinabalu
Mt Kinabalu
Mt Kinabalu

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OOST BORNEO

EAST INDIES, 1:1,000,000

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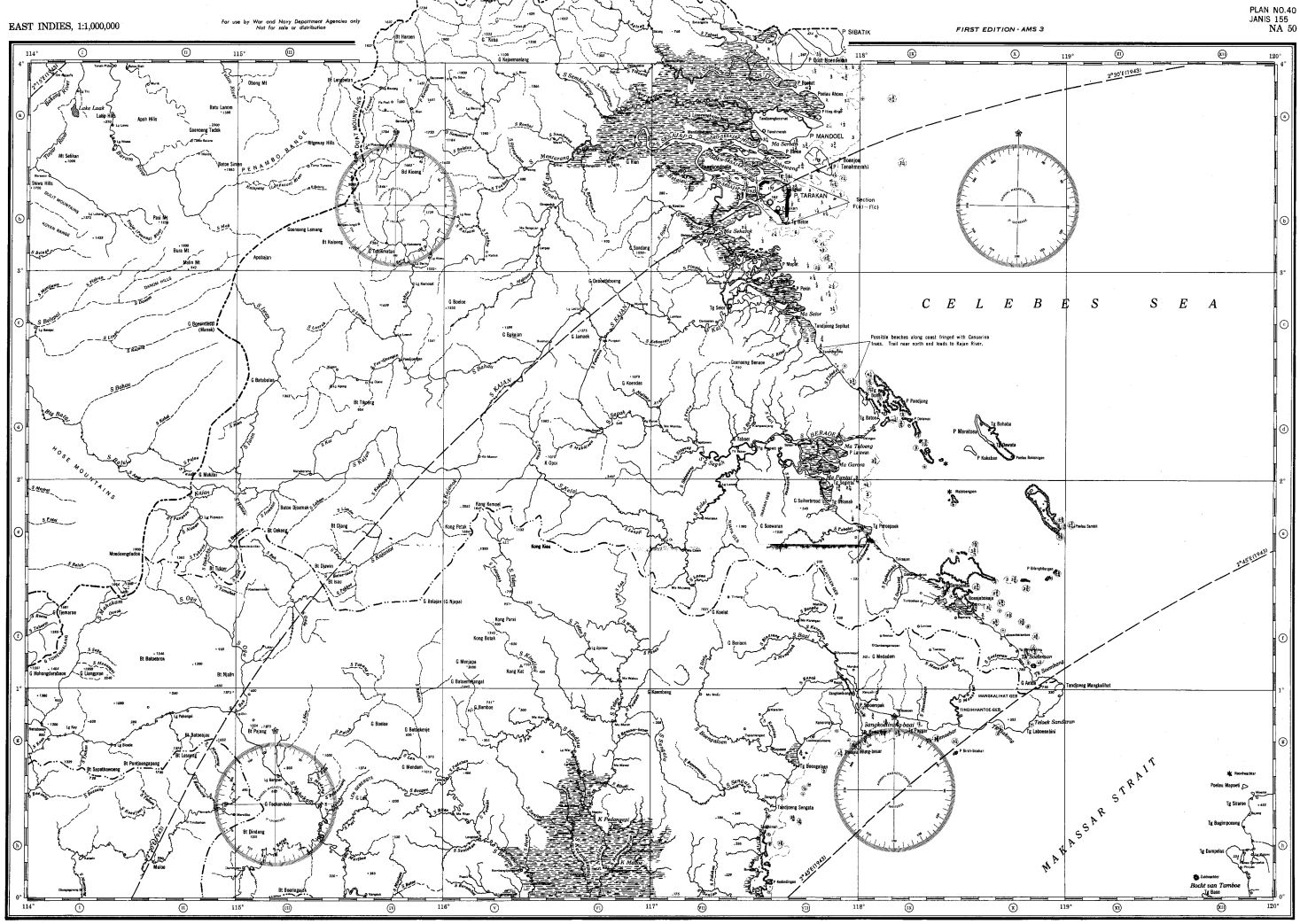
PLAN NO.40
JANIS 155
NA 50

FIRST EDITION - AMS 3


CELEBES SEA
MAKASSAR STRAIT
PENABUR RANGE
HOSE MOUNTAINS
MANDOEL
TARAKAN
SIBATIK
BERAU
MANGKALIHAT
Section F(a) - F(c)
Possible beaches along coast fringed with Casuarina trees. Trail near north end leads to Kajan River.
Bocht van Tomboe
Tandjong Mangkalihat
Tandjong Sengata
Tandjong Sangata
Pulau Mapoet
Pulau Sambit
Pulau Semit
Pulau Sumbaran
Pulau Sumbaran Besar
Pulau Sumbaran Ketjil
Pulau Tabalar
Pulau Tabalar Besar
Pulau Tabalar Ketjil
Pulau Tabalar Tengah
Pulau Tabalar Timur
Pulau Tabalar Barat
Pulau Tabalar Utara
Pulau Tabalar Selatan

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PLAN NO. 41
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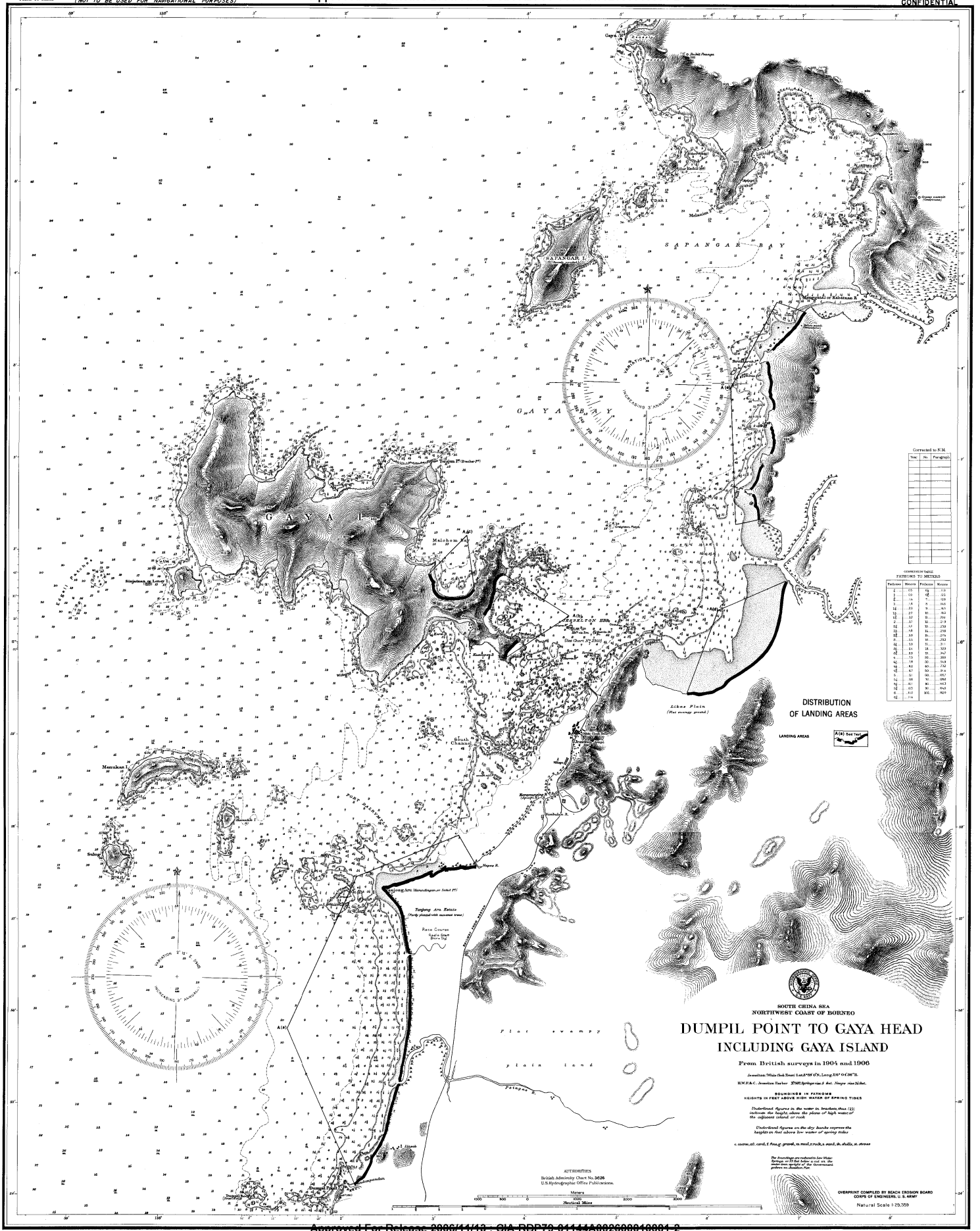
SAPANGAR BAY
GAYA BAY
GAYA I.
SAPANGAR I.
Malakum
Malohom
Kinjatan Pt. Lower
Kinjatan Pt. Upper
Tanjong Pt. (Bruckner Pt.)
Gaya Head
Bukit Pasagan
Pulau Sakid
Pulau Tiga
Mangrove of Kampong B.
Kampong Sapangar
Kampong Gaya
Kampong Malohom
Kampong Kinjatan
Kampong Tanjong
Kampong Tiga
Kampong Tanjong Aru
Kampong Tanjong Arn. Estate
Kampong Arn. (Kampongan or Inland Pt)
Kampong Sapangar Estate
Kampong Kinjatan Estate
Kampong Tiga Estate
Kampong Tanjong Aru Estate
(Partly planted with coconut trees)
Race Course
Cadle Stand
Stone Sig.
Manukan
Sulug I.
Manukan I.
Sulug I.
Port Malakoff
South Channel
Entrance Channel
Entrance Channel Lower Pt.
Entrance Channel Upper Pt.
Entrance Channel Middle Ground
Entrance Channel Middle Ground Buoy
Entrance Channel Buoy No. 1
Entrance Channel Buoy No. 2
Entrance Channel Buoy No. 3
Entrance Channel Buoy No. 4
Entrance Channel Buoy No. 5
Entrance Channel Buoy No. 6
Entrance Channel Buoy No. 7
Entrance Channel Buoy No. 8
Entrance Channel Buoy No.

No. 2798
Price 40 cents. (NOT TO BE USED FOR NAVIGATIONAL PURPOSES)
Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2
PLAN NO. 42
Janis 155
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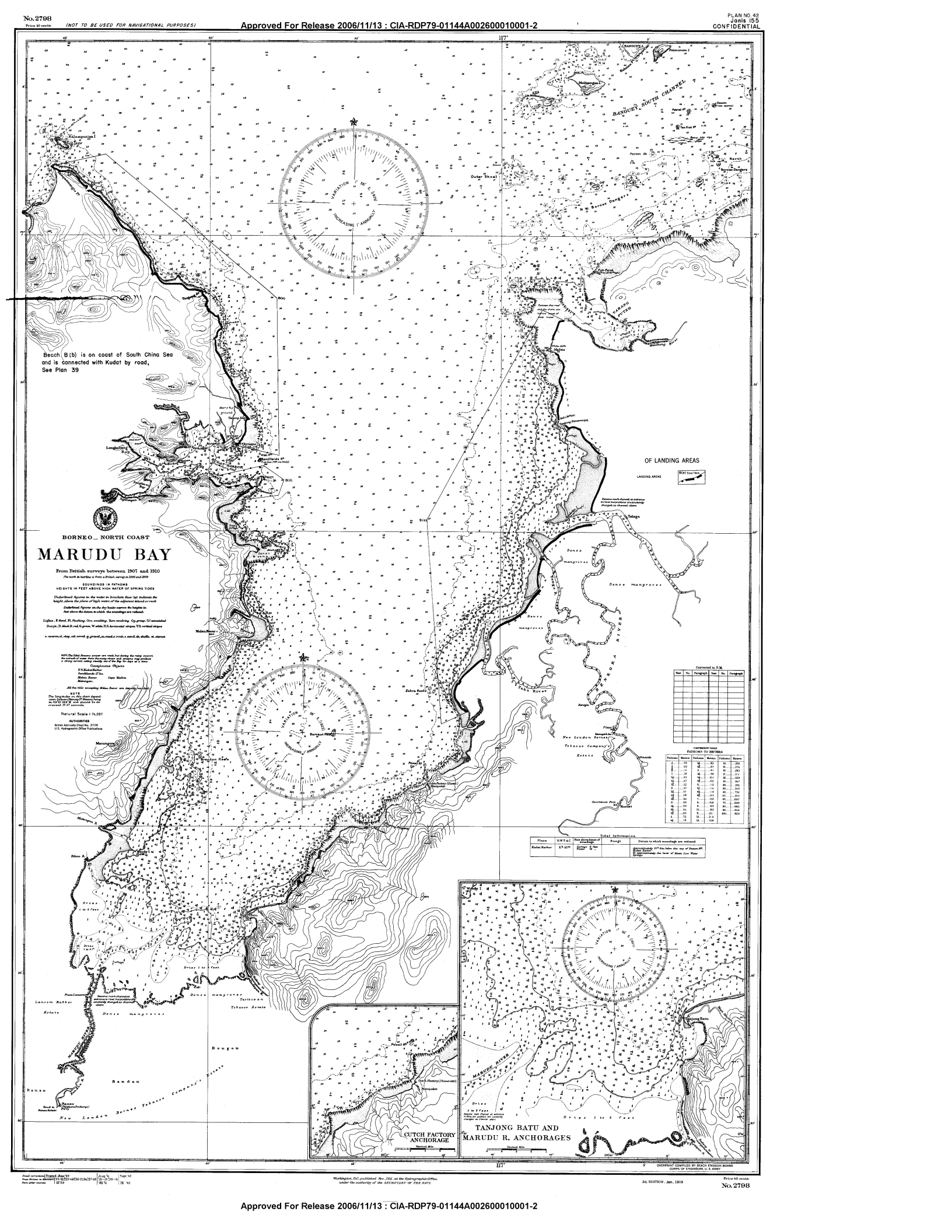
Beach B(b) is on coast of South China Sea and is connected with Kudat by road, See Plan 39
OF LANDING AREAS
LANDING AREAS
BORNEO_NORTH COAST
MARUDU BAY
From British surveys between 1907 and 1910
The work in hatches is from a British survey in 1900 and 1859
SOUNDINGS IN FATHOMS
HEIGHTS IN FEET ABOVE HIGH WATER OF SPRING TIDES
Natural Scale 1:76,087
AUTHORITIES
British Admiralty Chart No. 3726
U.S. Hydrographic Office Publications
Tidal Information
Corrected to N.M.
COMPARISON TABLE
FATHOMS TO METRES
Tanjong Batu
Marudu River
Cutch Factory (Closed-1921)
CUTCH FACTORY ANCHORAGE
TANJONG BATU AND MARUDU R. ANCHORAGES
OVERPRINT COMPILED BY BEACH EROSION BOARD CORPS OF ENGINEERS, U. S. ARMY

Washington, D.C. published Nov. 1910, at the Hydrographic Office, under the authority of the SECRETARY OF THE NAVY.
2d. EDITION, Jan. 1919

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Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

(NOT TO BE USED FOR NAVIGATIONAL PURPOSES)

PLAN No. 45
Janis 155
CONFIDENTIAL

BORNEO – NORTHEAST COAST

LANKAYAN TO SANDAKAN HARBOR

From British surveys to 1910

SOUNDINGS IN FATHOMS
HEIGHTS IN FEET ABOVE HIGH WATER OF SPRING TIDES

Underlined figures to the water in brackets thus: (6) indicate the height, above the plane of high water of the adjacent island or rock

Flood ⟵ in knots ⟶ Ebb

Lights – Alt. alternating, F. fixed, Fl. flashing, Occ. occulting, Barrow-bridge, Gp. group, (U) unwatched
Buoys – R. black R. red, G. green, W. white, H.S. horizontal stripes, V.S. vertical stripes, Chec. chequered
blk. black, c. coarse, ck. clay, col. coral, f. fine, g. gravel, gy. grey, m. mud, r. rock, s. sand, sh. shells, st. stones

A dashed line thus ..... denotes a danger line within which ships should not pass

NOTE
The Longitudes are for the Second year Colony Observatory, Kuching, 1° 19m 5s East of Greenwich and should be decreased by 0·02 in 1910 with later determinations.

Tidal Information

Place	H.W.F.&C.	Rise above datum of soundings	Range	Datum to which soundings are reduced
Labuk Bay	2h 30m	Spring ft fm		*Approximately the level of Mean low Water Springs*
Sandakan	23h 0m	Neaps ft fm		

AUTHORITIES
British Admiralty Charts Nos. 814-3,930
U.S. Hydrographic Office Publications

Natural Scale 1:97,665

CAUTION
The route marked has been followed, with safety, but in such reef strewn waters other dangers not charted, may exist

VARIATION 2° 15' E. (1944)
INCREASING 3' ANNUALLY

SANDAKAN HARBOR
(See Chart, H.Y. 1572)

Sandakan from the northeast

DISTRIBUTION OF LANDING AREAS

LANDING AREAS C(e) Sea Yards

CONVERSION TABLE
FATHOMS TO METRES

Fathoms	Metres	Fathoms	Metres
1	0·9	40	73·2
2	1·8	45	82·3
3	2·7	50	91·4
4	3·7	55	100·6
5	4·6	60	109·7
6	5·5	70	128·0
7	6·4	80	146·3
8	7·3	90	164·6
9	8·2	100	182·9
10	9·1		
15	13·7		
20	18·3		
25	22·9		
30	27·4		
35	32·0		

Corrected to N.M.

Year	No.	Paragraph

OVERPRINT COMPILED BY BEACH EROSION BOARD
CORPS OF ENGINEERS, U. S. ARMY

Small corrections | Printed: June '31
From Notices to Mariners | 1-31/33-47/34-35/37-44
From other sources | VI '31

Dec. '36 | Sch. 34 | Feb. 42
XII '36 | 38-39 | 42-43,37,41,43,44,45,46
 | X '40

Apr. '43
IV '43

June '44
VI '44

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No. 2116
Price 50 cents (NOT TO BE USED FOR NAVIGATIONAL PURPOSES)

PLAN NO. 44
Janis 155
CONFIDENTIAL

BORNEO—EAST COAST

DARVEL BAY

From British surveys in 1891 and 1892

SOUNDINGS IN FATHOMS
reduced to approximately the level of Mean Low Water Springs
HEIGHTS IN FEET ABOVE HIGH WATER OF SPRING TIDES

Underlined figures in the water in brackets (thus 12) indicate the height of the adjacent island or rock above high water

Natural Scale 1:60,000

NOTE
The longitudes on this chart depend upon Sandakan, Fort Pryer, R. S., being in 118°04'00" E. Late determinations place Fort Pryer in 118°04'36" E.

TIDAL INFORMATION

Place	Lunitidal Intervals		Height above datum of soundings		
	H.W.Fluct.	L.W.Fluct.	Mean H.W. Springs	Mean H.W. Neaps	Mean L.W. Springs
	h. m.	h. m.	feet	feet	feet
Lahad Datu	5 26		8	4	0

LIGHTS
F.Red, F.Flashing, five revolving, & ten obscuring, flx groups, 8 red, 14 white, & 2 green, 8 white, one section (21 nautical miles), 8 red, 14 white, & 2 green, 8 white, one section (21 nautical miles). Lights are white unless otherwise stated. Heights of lights are above high water.

DARVEL PENINSULA

DISTRIBUTION OF LANDING AREAS

LANDING AREAS

CLEARING MARKS

CLEARING MARKS

CONVERSION TABLE
FATHOMS TO METRES

Fathoms	Metres	Fathoms	Metres	Fathoms	Metres	Fathoms	Metres
1	1·83	26	47·5	51	93·3	76	139·1
2	3·7	27	49·4	52	95·2	77	140·9
3	5·5	28	51·2	53	97·0	78	142·7
4	7·3	29	53·0	54	98·8	79	144·6
5	9·1	30	54·9	55	100·6	80	146·4
6	11·0	31	56·7	56	102·5	81	148·2
7	12·8	32	58·5	57	104·3	82	150·0
8	14·6	33	60·4	58	106·1	83	151·9
9	16·5	34	62·2	59	107·9	84	153·7
10	18·3	35	64·0	60	109·8	85	155·5
11	20·1	36	65·8	61	111·6	86	157·3
12	22·0	37	67·7	62	113·4	87	159·2
13	23·8	38	69·5	63	115·2	88	161·0
14	25·6	39	71·3	64	117·1	89	162·8
15	27·4	40	73·2	65	118·9	90	164·6
16	29·3	41	75·0	66	120·7	91	166·5
17	31·1	42	76·8	67	122·5	92	168·3
18	32·9	43	78·6	68	124·4	93	170·1
19	34·8	44	80·5	69	126·2	94	172·0
20	36·6	45	82·3	70	128·0	95	173·8
21	38·4	46	84·1	71	129·8	96	175·6
22	40·2	47	86·0	72	131·7	97	177·4
23	42·1	48	87·8	73	133·5	98	179·3
24	43·9	49	89·6	74	135·3	99	181·1
25	45·7	50	91·4	75	137·2	100	182·9

MILITARY ENGLISH TERMS

BRUNEI

CLEARING MARKS

AUTHORITIES
British Admiralty Chart No. 2080
U.S. Hydrographic Office Publications

DRAWN COMPILED BY BEACH FROSON BOARD
COPIES OF SOUNDINGS, A. A. ROSS

Continued Southward on Chart 2117

Washington, D.C., published June 1905 at the Hydrographic Office, under the authority of the SECRETARY OF THE NAVY.

New Publication 4th Ed., Feb. 1936

4th EDITION, Feb. 1936

Price 50 cents

No. 2116

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Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

No. 2793
Price 50 cents
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PLAN NO. 45
Jonis 155
CONFIDENTIAL

BORNEO.—EAST COAST

NORTHWESTERN PART OF
SIBUKO BAY

From British and Netherlands Government surveys to 1910

SOUNDINGS IN FATHOMS
HEIGHTS IN FEET ABOVE HIGH WATER OF SPRING TIDES

Underlined figures on the dry banks express the heights in feet above low water of spring tides

Lights.—*F.*fixed, *Fl.*flashing, *Occ.*occulting, *Alternating* (*2*) *alternated*

Buoys.—*B.*black, *R.*red, *G.*green, *W.*white, *H.S.*horizontal stripes, *V.S.*vertical stripes

Flood ⟵ *to* ⟶ *Ebb*

*clyey, soft, sand, g.*gravel, *h.*hard, *m.*mud, *r.*rock, *s.*sand, *sh.*shells, *st.*stones

Natural Scale 1/150,000

The parallel of 4°45′ N. is the Northern boundary of South territory

NOTE

The bearings are true, the Variation 2° 30′ E. (1910) increasing 3′ annually. See Admiralty Chart No. 2184 (Plan 1) for Local Attraction at Tawalisan, Sibuko Bay. Star Point (04° 21′ 30″ E. therefore all longitudes on this chart should be reduced 21″.0

AUTHORITIES
British Admiralty Chart No. 2226
U.S. Hydrographic Office Publications

DISTRIBUTION
OF LANDING AREAS

LANDING AREAS

Corrected to N.M.

Year	No.	Paragraph

CONVERSION TABLE
FATHOMS TO METRES

Fathoms	Metres	Fathoms	Metres	Fathoms	Metres
¼	0·5	6	11·0	70	128·0
½	0·9	7	12·7	80	146·3
¾	1·4	8	14·6	90	164·6
1	1·8	9	16·5	100	182·9
1¼	2·3	10	18·3	110	201·2
1½	2·7	15	27·4	120	219·5
1¾	3·2	20	36·6	130	237·8
2	3·7	25	45·7	140	256·0
2¼	4·1	30	54·9	150	274·3
2½	4·6	40	73·2	160	292·6
2¾	5·0	50	91·4	170	310·9
3	5·5	60	109·7	180	329·2

Small corrections Printed Dec. 1941 | Mar. '20 | Sept. '39 | Dec. '43 | May '44
From Notices to Mariners: 1941 (K.&M.) | 1941 (K.&M.) | 1942 (P.&C.) | 1943 | 1944
From other sources: 1937a | 2 '21 | 15 '38 | XII '43 | K'44

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EDITION: 3d. Mar. 1918

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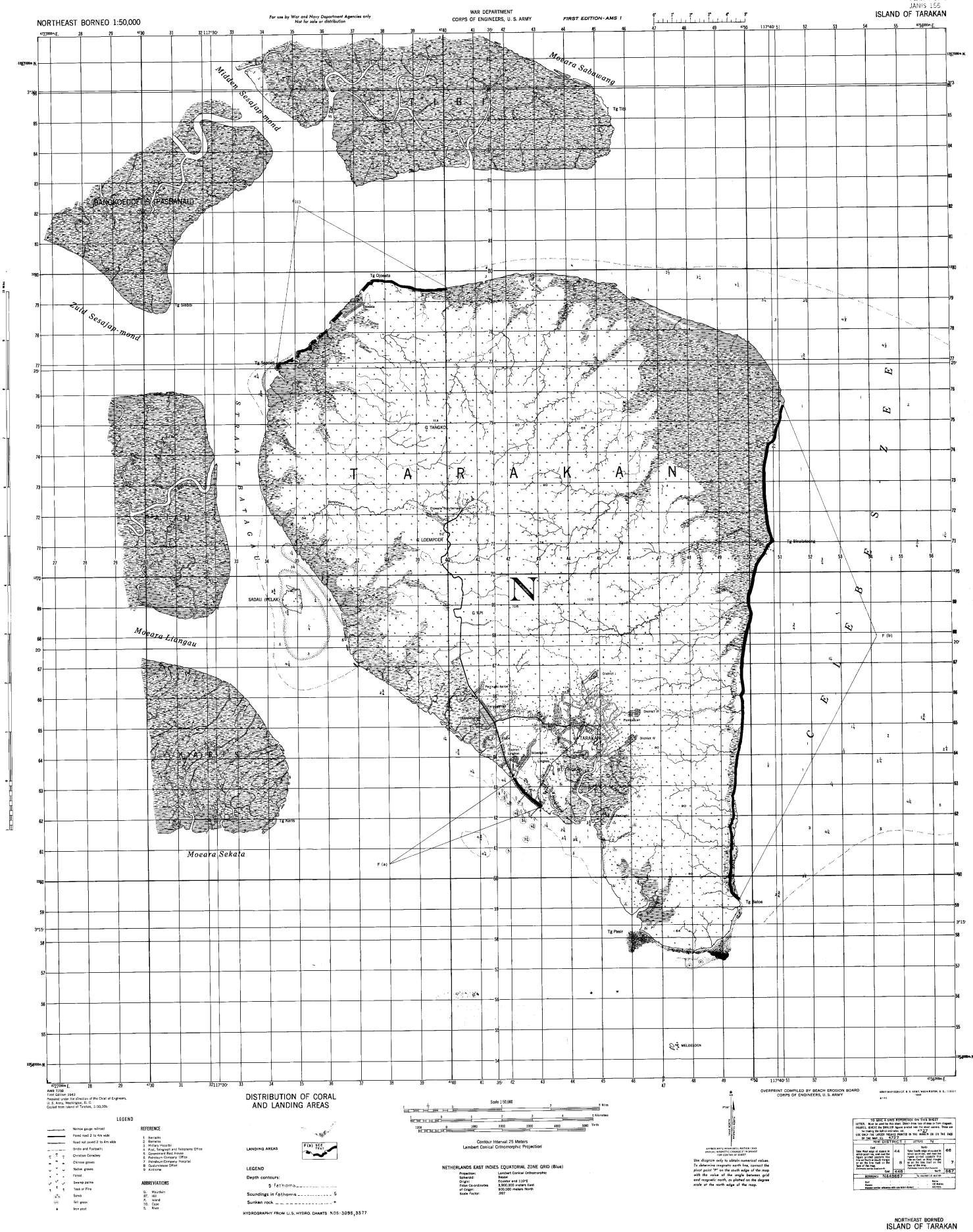

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EAST INDIES 1:1,000,000

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MANADO

FIRST EDITION-AMS 3

Plan 47
JANIS No.155
Confidential

NA 51

COASTAL TERRAIN- NORTH ARM OF CELEBES

Steep mountainous coast; many rocky headlands separate small isolated coves. Slopes generally steeper than 50% not uncommonly up to 70% or more. Headlands commonly fringed by coral reefs; narrow sand or gravel beaches common in coves. Mostly virgin forest; some secondary jungle and grassland. Soils thin, stony or gravelly; bedrock at or near surface in many places.

Undulating low hills and rolling to flat benches. Benches commonly have steep seaward slopes (up to 80%); most other slopes 10% to 50%. Coconut groves very common; fruit trees, maize, some rice; scattered secondary woods and brush or grassland. Generally sandy or gravelly beaches.

Coastal plain. Local groups of low hills. Some small swampy patches near river mouths not shown. Coconut groves predominant; some fruit trees, maize, and rice fields; scattered secondary woods, grassland, and rare patches of virgin forest; mangroves and swamp palms in marshes; Casuarina common on beaches. Sandy or gravelly beaches common. Sandy or gravelly soils.

Swamp. May be separated from sea by narrow sandy beaches. In places there may be series of sandy strands separated by narrow moist or marshy depressions aligned parallel to shore; Casuarina forest common on strands, mangrove or fresh-water swamp forest in intervening depressions.

CONVERSION GRAPH
Meters / Feet

TOPOGRAPHY: Plain extends south and inland to join plain crossed by South Marsadja. Between South Marsadja and Poelina, coast is bordered by isolated groups of hills.
GROUND: Plain of South Marsadja is extensively flooded during rainy season. Chiefly sandy soils.
VEGETATION: Coconut and sago palms and fairly open woods; mountains forested.
REMARKS: Sparse population. Local communication by horse trail or footpath. South Marsadja navigable by small prahus 2 miles inland.

TOPOGRAPHY: Plain 10 miles long and up to 5 miles wide; in part slightly undulating terrain rises south to mountains. Separated by hilly stretch from plain east of Sindaong (Siwuli), about 5.5 miles long and equally wide.
GROUND: Chiefly sandy soils. Most of plain is dry ground.
VEGETATION: Coconut groves; some rice fields, grassland, and woods.
REMARKS: Footpath crosses mountains, follows South Palasa to south coast.

TOPOGRAPHY: Plain up to 6 miles in width extends along 12 miles of coast; backed by rugged mountains.
GROUND: Sandy or gravelly soils on plain. South part flooded during rainy season.
VEGETATION: Dry inland parts of plain cultivated (chiefly coconut palms, some rice fields); some grassland and second growth. Mountains forested.
REMARKS: Local communication poor; cart trails interrupted by stretches traversed only by footpaths.

TOPOGRAPHY: Between Bokat and Tg. Tamiang mountains rise near shore; many small coves separated by capes or rocky headlands. Between Bosol and Bokat is plain 4 miles wide and 6 miles long; subject to flood; marshy, especially near river mouths; sandy beach.
GROUND: Chiefly sandy or gravelly soils on lowlands; drainage poor.
VEGETATION: Coconut groves, some secondary woods and grassland on dry ground. Some mangrove and nipa palm.
REMARKS: Dirt road passable by automobile in dry season. Follows coast between Bosol and Paleh.

TOPOGRAPHY: Irregular coast with series of hilly capes separating small plains less than a mile wide, backed by benches and rolling hills. Hilly islands dominate bay.
GROUND: Sandy and gravelly soils. Plains probably poorly drained near mouths of streams.
VEGETATION: Mangroves and nipa on lowland shores, coconut groves on plains; intervening hills densely wooded.
REMARKS: Koeandang is north terminus of all-weather automobile road to Gorontalo; gentle grades, no narrow defiles or sharp turns; maximum altitude 1,300 feet; 7 mi route. Alternate road via Hakarist.

TOPOGRAPHY: Plain 1 to 1.5 miles wide at west, nearly 4 miles wide at Tg. Binta, and 12 miles long; backed by rugged mountains. To west is series of hilly to mountainous and rocky headlands separating small swampy coves.
GROUND: Chiefly sandy and gravelly soils. Large area around Tg. Binta flooded during wet season. Drainage poor.
VEGETATION: Coconut groves and secondary forest; swamp forest around river mouths.
REMARKS: Local communication by wagon road and horse trail.

TOPOGRAPHY: Coastal plain half mile wide or less on Amoerang Bay; outside bay plain is broken by low benches abutting on rugged mountains.
GROUND: Gravel and sands along shore and on low benches; thin stony soils in mountains. Swamp along part of north and south sides of Amoerang Bay.
VEGETATION: Chiefly coconut groves. Mangrove forest in marshes; strip of mangroves along shore from Amoerang Bay to miles southwest.
REMARKS: Amoerang has better harbor than Manado; good road network; road follows natural corridor southeast to Belang, connects with Langoan and Kakas on Tondano Lake. Coastal road to Manado connects with other roads to Tondano Lake.

TOPOGRAPHY: Coastal plain less than half mile wide rises to benches and rolling hills. Broad valley forms corridor southeast to Kema.
GROUND: Well-drained sandy and gravelly soils predominate.
VEGETATION: Coconut palms and other cultivated groves.
REMARKS: Manado, second port of Celebes, is center of well-integrated net of good roads; macadamized road follows natural corridor southeast to Kema; another to Tumohon and Tondano; coastal road to Amoerang connects with other roads to Tondano.

TOPOGRAPHY: Coastal plain about a mile wide, backed by low benches abutting on higher hills and rolling upland.
GROUND: Sandy or gravelly soils. Marshy along much of coast.
VEGETATION: Mangroves along coast; some cultivation inland.
REMARKS: Undulating terrain extends inland to automobile road (fair surface, light traffic) from Likupang to Manado-Kema highway.

TOPOGRAPHY: Coastal plain up to a mile wide and 3 miles long; rises inland to steep volcanic slopes.
GROUND: Soil chiefly sandy. May be in part marshy during rainy season.
VEGETATION: Chiefly coconut groves and some secondary woods and grassland.
REMARKS: Macadamized automobile road through broad low depression connects Kema with Manado; gentle grades, no defiles. Connects with roads to Tondano Lake and to Likupang on northeast coast.

TOPOGRAPHY: Coastal plain on Amoerang Bay a mile or less in width and 6 miles long; rises inland to rugged hills on south and long volcanic slopes on north; low benches behind Watoelinei Bay and on Totok Bay.
GROUND: Seaward margins of plains largely swampy; dry ground inland. Sandy and gravelly soils predominate.
VEGETATION: Coconut groves, some woods and grassland.
REMARKS: All-weather automobile road crosses peninsula from Belang to Amoerang; follows low depression through mountains; connects with road to Langoan and Tondano Lake.

TOPOGRAPHY: Plain on Tomini Bay is 12 miles long and up to 5 miles wide, rises inland to rugged hill mountains. Sandy beach along shore, with dunes in north reported reaching "considerable height," probably about 10 to 20 feet.
GROUND: Chiefly sandy soils. North part of plain swampy, south half well drained.
VEGETATION: Swamp forest on north; coconut palms on dry south part.
REMARKS: Footpath to Gimpi crosses peninsula to Sindaong on Totok Bay. No coral reefs offshore.

Plain nearly 3 miles wide extends a few miles inland along valley. Local communication by horse trail and footpath only.

TOPOGRAPHY: Many small reentrant lowlands separated by rugged promontories. At Soemalata is plain less than a mile wide.
GROUND: Sandy or gravelly soils on lowlands, in places poorly drained.
VEGETATION: Coconut groves on hills and dry lowland; mangrove and nipa common along shores.
REMARKS: Abandoned gold mine in hills behind Soemalata, and another near Paleleh, where there is local network of automobile roads; dirt road [illegible] Gorontalo in dry season. Gorontalo Paleleh with Boeol.

TOPOGRAPHY: From Biroeoi east is coastal plain a mile or less in width, broken by scattered low hills. From Boemoeng west is similar plain. Plains separated by rough hilly peninsula.
GROUND: Sandy or gravelly soils on plains; thin stony soils on hills. Western plain poorly drained, marshy; eastern plain has small marshy patches along streams. Some stretches of sandy beach; coral reefs fringe parts of shoreline.
VEGETATION: Chiefly coconut groves; swamp forest, secondary woods, some grassland, and virgin forest in hills.
REMARKS: Horse trail connections east to Bintaoena and west to Koeandang, terminus of highway to Gorontalo.

Around Belang is well-drained plain a mile or less wide; swampy around estuary of Lembagin. Macadamized automobile road from Lembagin to Amoerang and to Kotamobagoe; wagon road that may be usable by automobiles from Kotamobagoe west to large upland plain of Ongkag Doemoga River; military road to Gorontalo was planned on this road, but extent of completion is unknown.

TOPOGRAPHY: Coastal plain 5 or 6 miles wide at Tg. Pandjang, narrowing eastward; backed by rugged hills. Isolated hills near shore in places.
GROUND: Chiefly sandy soils; swamp soils around Tg. Pandjang. Sandy beach separates swamp from sea. Much of plain marshy, especially around river mouths.
VEGETATION: Swamp forest (mangrove, nipa, sago palms) around Tg. Pandjang; high, Casuarinas on beach; elsewhere plain mostly cultivated: rice, coconuts, maize; scattered grassland and secondary woods.
REMARKS: Dirt road passable by automobile in dry season connects Manias with Boentoelio and Tilamoeta.

TOPOGRAPHY: Steep mountainous coast; many rugged, rocky headlands separate small reentrants. Gorontalo and Pagoejaman bays dominated by high terrain; are principal gateways through steep mountain ridge to broad, intensely cultivated interior lowlands.
GROUND: Chiefly thin, stony mountain soils; small sandy beaches in coves. Mostly well drained.
VEGETATION: Moderately luxuriant primary jungle.
REMARKS: Gorontalo, principal port on Tomini Gulf, is connected with Koeandang on north coast by good all-weather automobile roads; at least one is macadamized and is an easy route—gentle grades, no narrow defiles or sharp turns; maximum altitude 1,200 feet.

TOPOGRAPHY: Plains up to 6 miles wide west of Ongka and east of Moggondo, rising abruptly to rugged mountains; mountains reach sea between these villages.
GROUND: Chiefly sandy and silty soils. Plains subject to flood, largely marshy during rainy season, especially around lakes near Boiano and around river mouths.
VEGETATION: Mangroves and swamp palms around lakes and river mouths. Extensive rice fields, some coconut groves; scattered patches of secondary woods and grasslands.
REMARKS: Dirt road, passable by automobile in dry season, runs from Ongka west along coast. Horse trails follow coast east of Ongka.

TOPOGRAPHY: Coastal plain 1 to 5 miles wide, rising abruptly to rugged hills.
GROUND: Chiefly sandy soils. Marshy near river mouths.
VEGETATION: Rice fields extensive near Moosong; some secondary woods and grassland. Mountains densely forested. Mangroves and swamp palms in marshes.
REMARKS: [illegible] trails and footpaths.

TOPOGRAPHY: Coastal flat averaging about half mile wide; extends farther inland along valleys, narrows to beach around some spurs. Rises abruptly to rugged, forested hills.
GROUND: Chiefly sandy or gravelly soils. Strip of mangrove swamp along most of shore. Ground drier inland, but becomes marshy in places during rainy season.
VEGETATION: Mostly coconuts, some other cultivated growth. Scattered secondary woods and grassland. Narrow strip of mangrove forests along most of shore.
REMARKS: Dirt road, passable by automobile in dry season, connects Ongka with Parigi on southwest shore Tomini Gulf. Footpath up South Palasa valley crosses mountains to Dondo Bay.

Plain nearly 3 miles wide extends a few miles inland along valley. Local communication by horse trail and footpath only.

RESIDENTIE MANADO

GULF OF TOMINI

CELEBES SEA

SANGIHE ISLANDS

8 hr. 12 min. L.M.T. ahead of G.M.T.

8 hr. 20 min.

A.M.S. 9306 (G.S.G.S. 4204)
Third AMS Printing 1943
First Edition (1944) 1 1944
Compiled under the direction of the Chief of Engineers, U.S. Army, by the Army Map Service (PT), U. S. Army, Washington, D. C., 1943. Digged from a Dutch map. Manuscript 11.GSC(30), dated 1942.

Scale 1:1,000,000

Modified Polyconic Projection

INDEX TO BOUNDARIES

INDEX TO ADJOINING SHEETS

HEIGHTS IN METRES

LEGEND

GLOSSARY

ALTITUDE TINTS
Meters / Feet

MANADO, CELEBES

000-E 12000/400Nx600

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EAST INDIES 1:1,000,000

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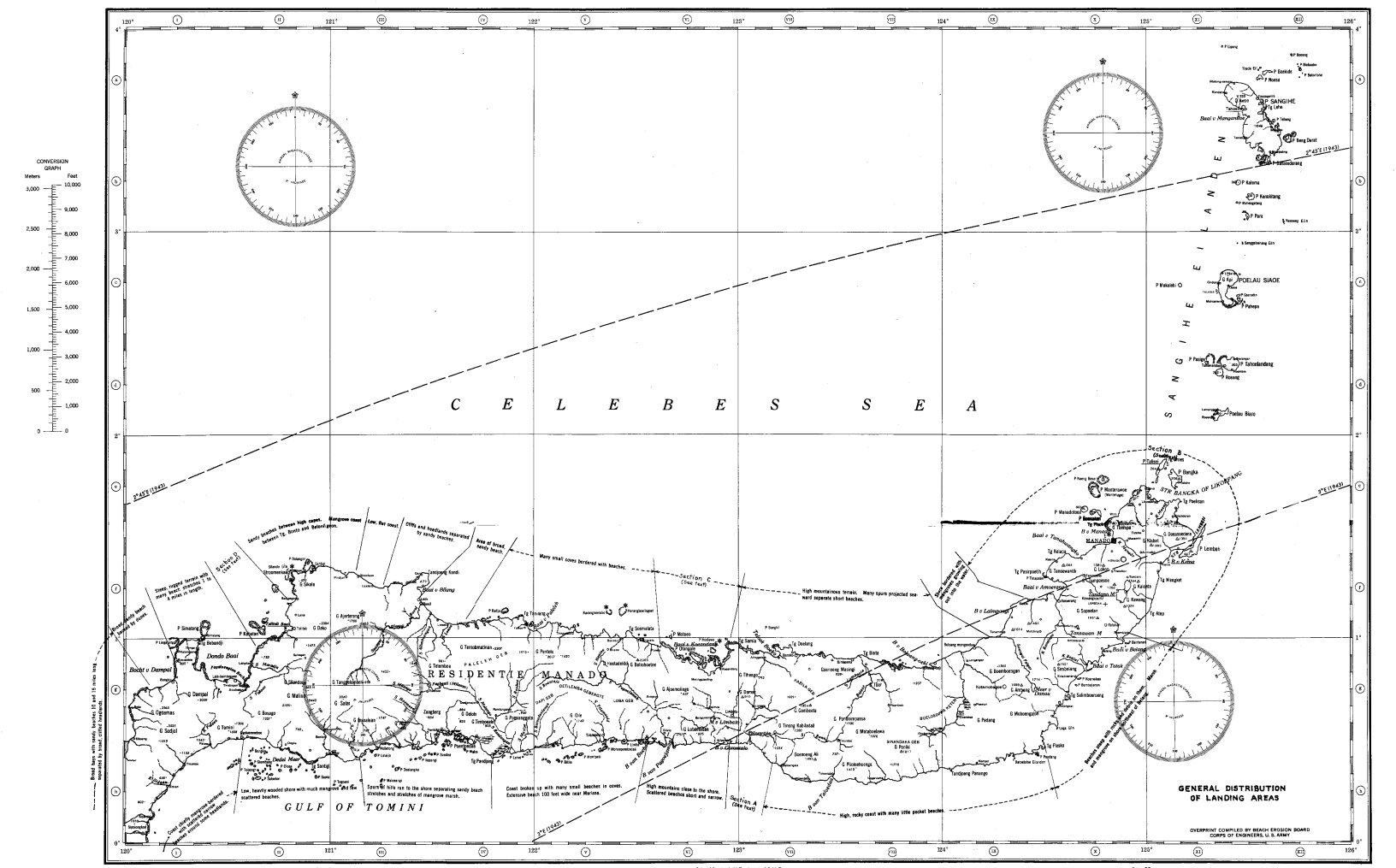
MANADO

FIRST EDITION - AMS 3

PLAN NO.48
JANIS 155
NA 51



A.M.S. 9306 (G.S.G.S. 4204)
First AMS Printing 1943
First Edition (AMS) 3 1944

Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service (PC), U. S. Army. Compiled in 1943 and 1944 from various Dutch maps. Mercator 1:1,000,000. Datum 1943

6 hr. 04 min. | 8 hr. 12 min. L.M.T. ahead of G.M.T. | 8 hr. 20 min.

Scale 1:1,000,000

Modified Polyconic Projection

INDEX TO BOUNDARIES

INDEX TO ADJOINING SHEETS

GSGS 2505

LEGEND

GLOSSARY

ALTITUDE TINTS

HEIGHTS IN METRES

MANADO, CELEBES
000-E 12000/400Nx600

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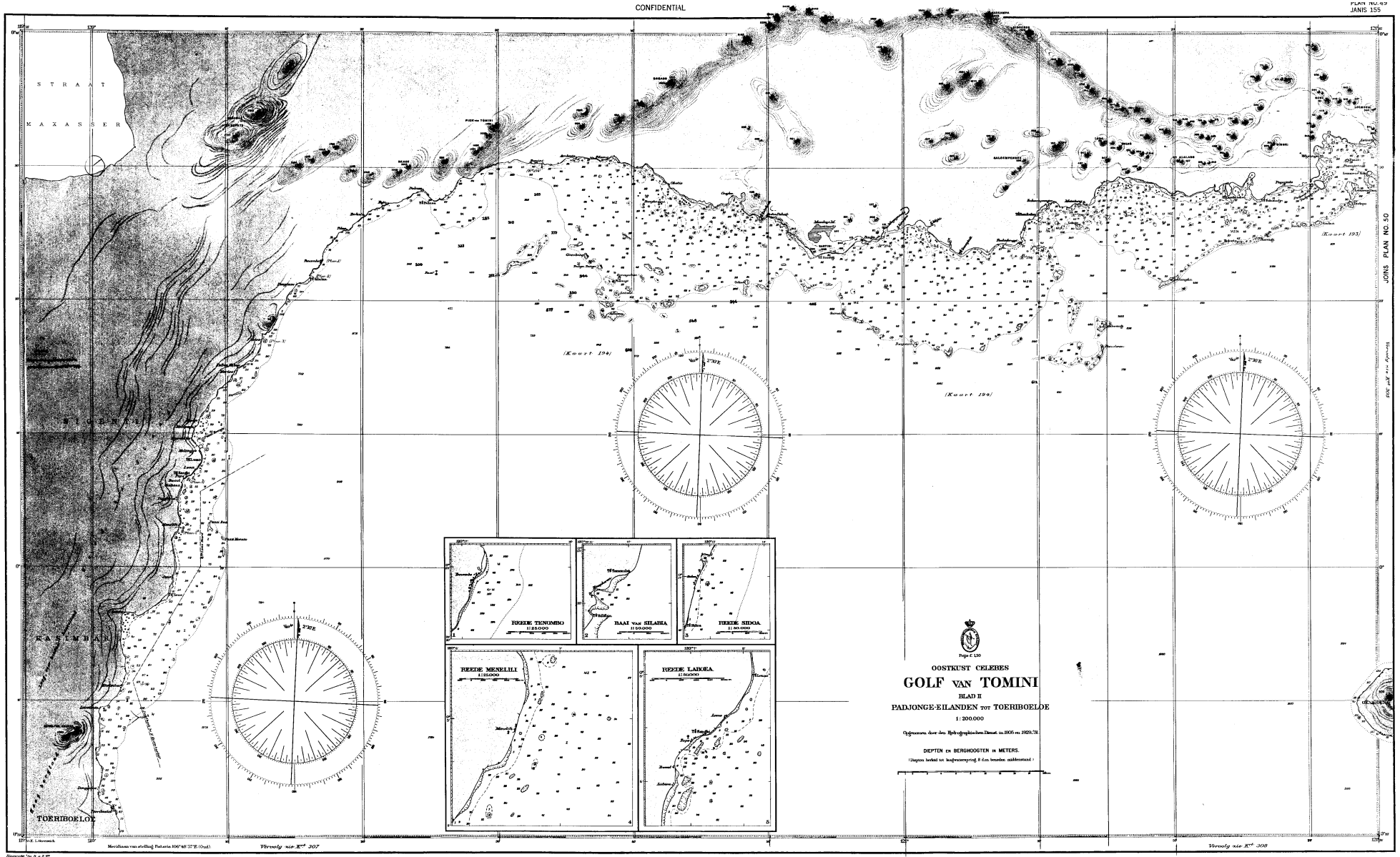
CONFIDENTIAL

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2



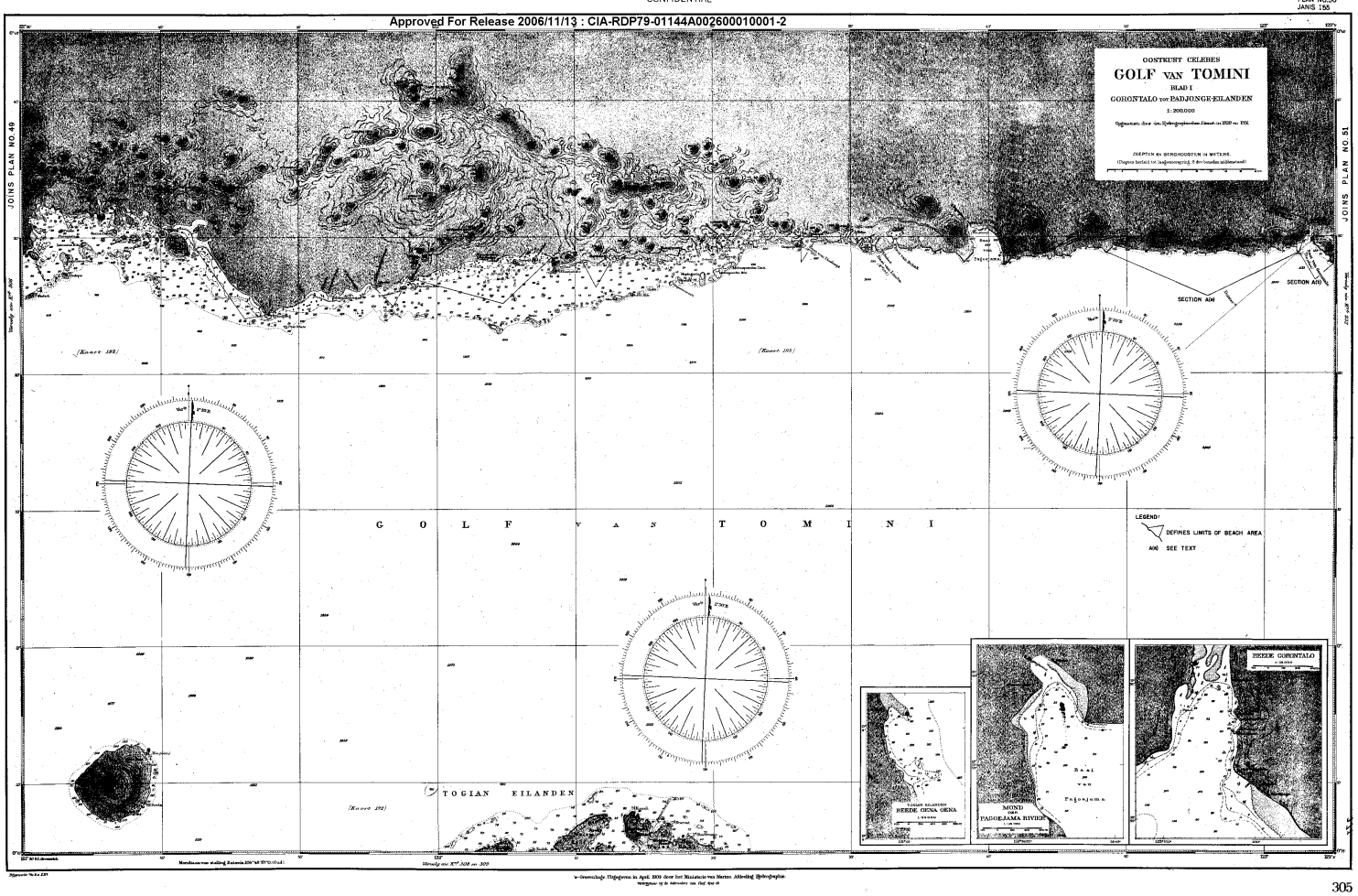
's-Gravenhage. Uitgegeven in Dec.r 1906 door het Ministerie van Marine. Afdeeling Hydrographie.
Herzien en uitgegeven Mei 1934.

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

CONFIDENTIAL

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PLAN NO.50
JANIS 155



Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

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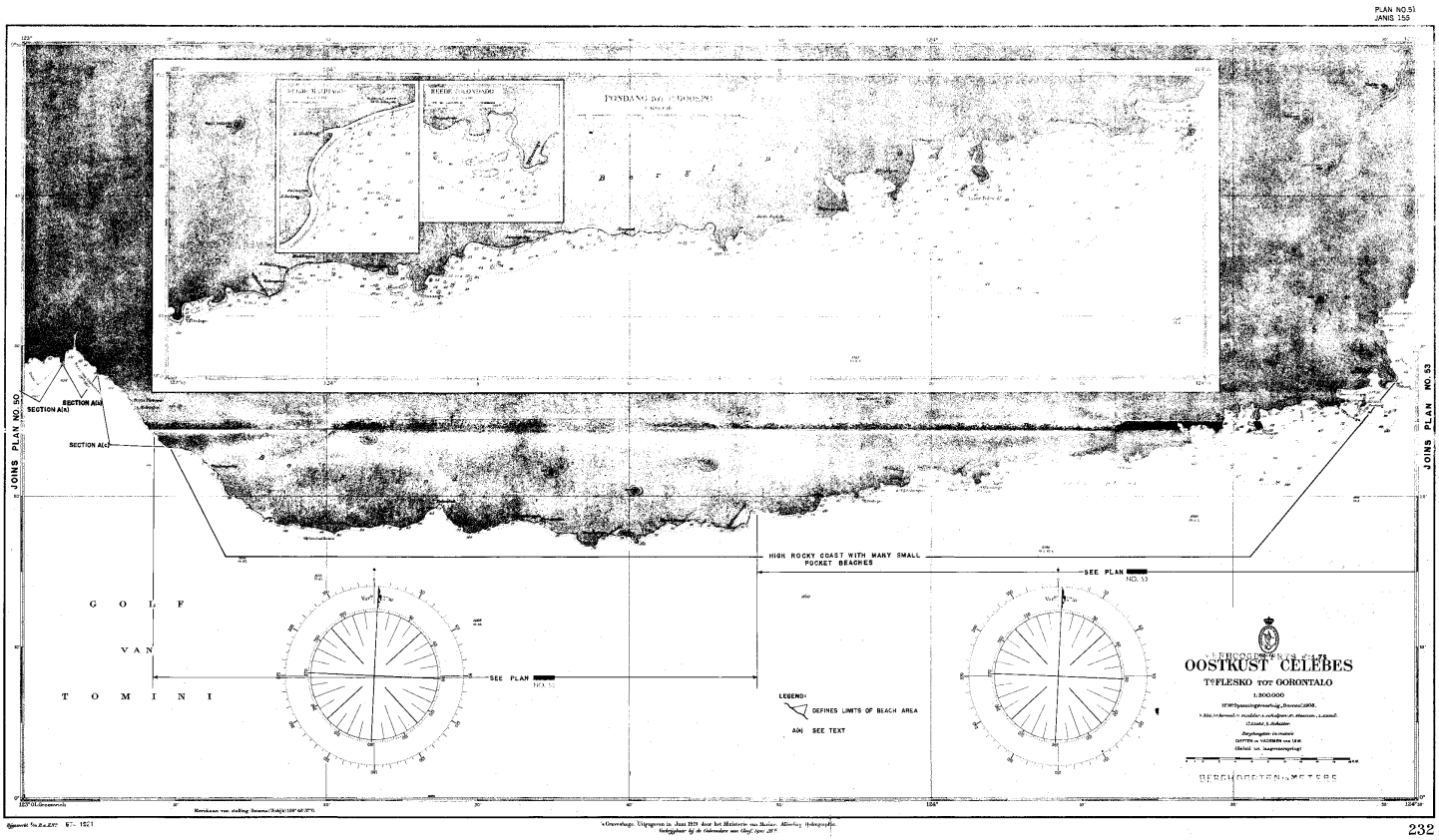
Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2



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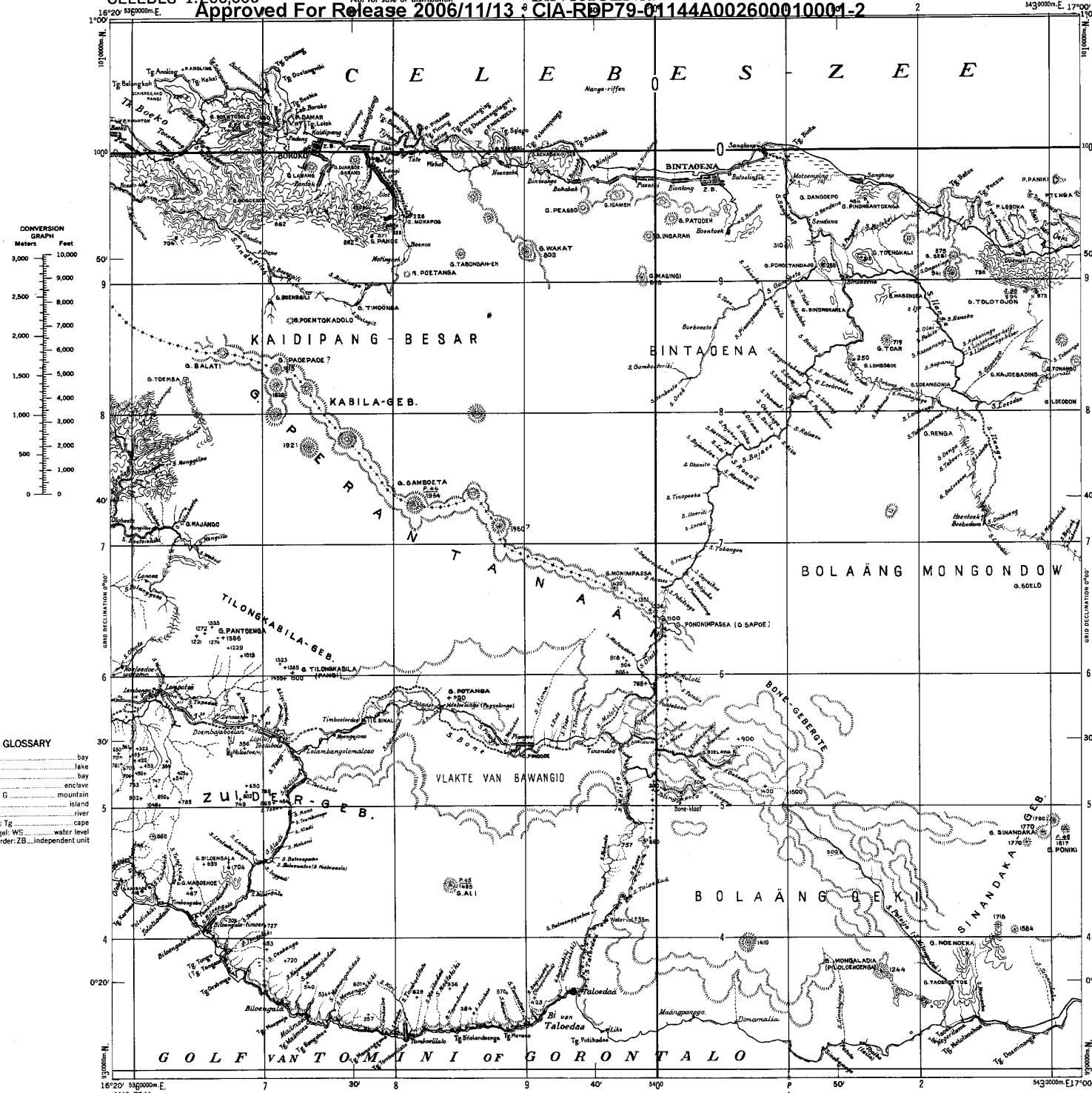
PLAN NO. 52
JANIS 155

CELEBES 1:200,000 — BINTAOENA — SHEET 86-87/XVI-XVII

FIRST EDITION-AMS 1

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2



CONVERSION GRAPH
Meters / Feet

GLOSSARY

Baai: B	bay
Danau: D	lake
Dijko: Dk	bay
Enc	enclave
Goenoeng: G	mountain
Poelau: P	island
Salo: S	river
Tandjoeng: Tg	cape
Waterspiegel: WS	water level
Zelfbestuurder: ZB	independent unit

AMS T541
First Edition (AMS-1), 1942.
Prepared under the direction of the Chief of Engineers, U. S. Army, 1942.
Copied from a Dutch map compiled in 1939, by the Army Map Service.

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C., 111749
5-44 1942

INDEX TO ADMINISTRATIVE DIVISIONS

1. Division — Manado
Sub-division — Bolaang Mongondow

2. Division — Gorontalo
Sub-division — Gorontalo

INCIDENCE OF GRID LETTERS and INDEX TO ADJOINING SHEETS

Meridian of Batavia (which is 106°48'27.79"E of Greenwich)

TO GIVE A GRID REFERENCE ON THIS SHEET
LETTER. Must be used for this sheet. Obtain from face of map or from diagram.
FIGURES. IGNORE the SMALLER figures printed near the sheet corners. These are for finding the full co-ordinates, viz. 536/939
USE ONLY THE LONGER FIGURES POINTED IN THE MARGIN OR ON THE FACE OF THE MAP, Viz. 5360/9390

POINT PINOGOE — LETTERS D

East: Take West edge of square in which point lies, and read the figure printed opposite this line on North or South margin or on the line itself on the face of the map. Estimate tenths Eastwards	9	North: Take South edge of square in which point lies, and read the figure printed opposite this line on East or West margin or on the line itself on the face of the map. Estimate tenths Northwards	5
East 90	0	North 53	5

REFERENCE D9055 — To nearest 1,000 metres

Unit — Metres
Square — 10,000 Metres
Nearest similar reference with one letter distant — 1000 Yards

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthomorphic
Spheroid:	Bessel
Origin:	Equator and 110°E
False Co-ordinates of Origin	3,900,000 meters East 900,000 meters North

BINTAOENA
N016-E12308/44x40

APPROXIMATE MEAN DECLINATION 1942
DECREASE 3'
NOTE: Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the south edge of the map with the value of the angle between GRID NORTH and MAGNETIC NORTH, as plotted on the degree scale at the north edge of the map.

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

CONFIDENTIAL

NOTE: OFFICERS USING THIS MAP WILL MARK HEREON CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

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PLAN NO.53
JANIS 155

CELEBES 1:200,000

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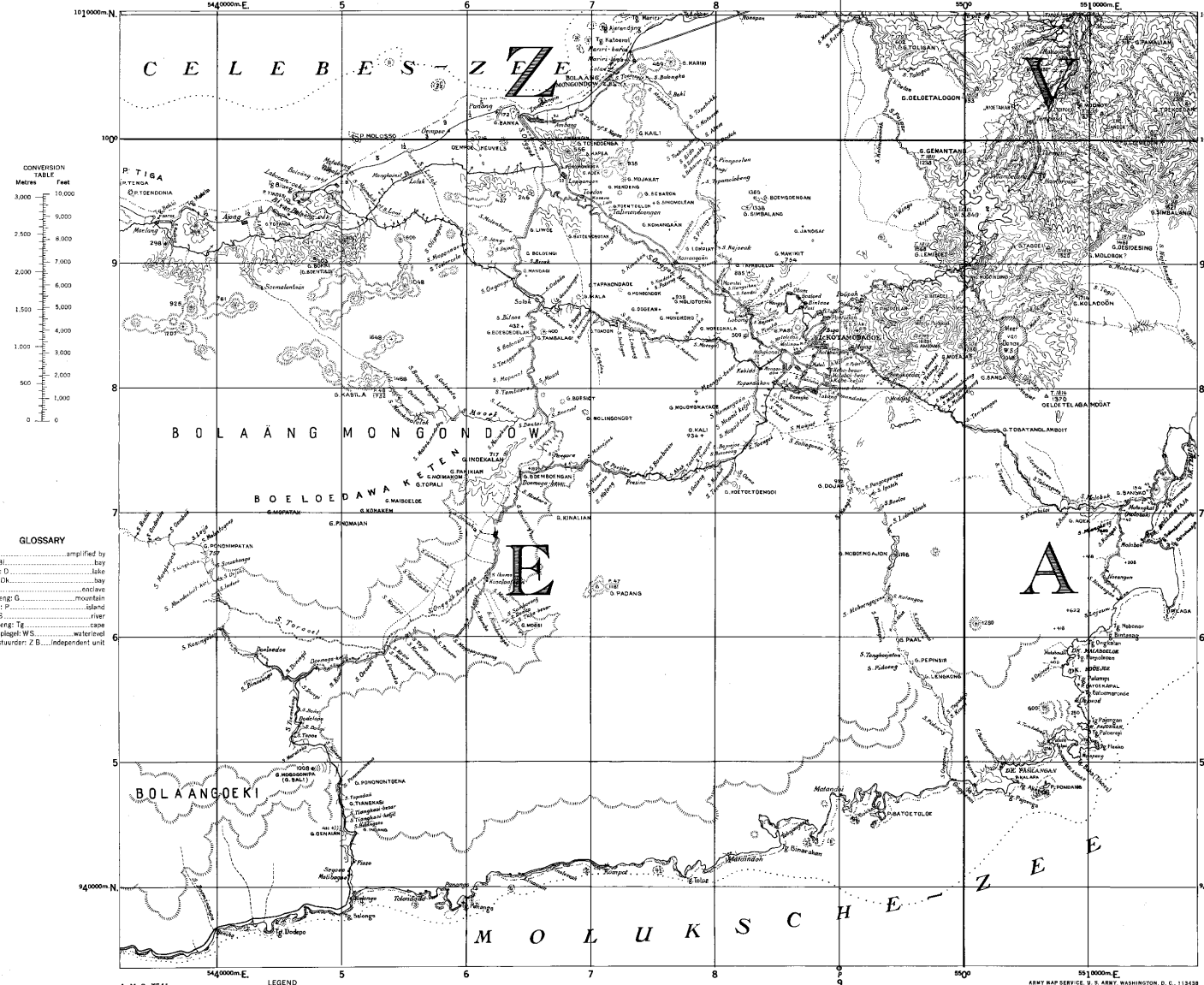
KOTAMOBAGOE

FIRST EDITION - AMS 1

SHEET 88-89-90/XVI-XVII


C E L E B E S - Z E E
B O L A Ä N G M O N G O N D O W
B O E L O E D A W A K E T E N
B O L A Ä N G O E K I
M O L U K S C H E - Z E E
Z
E
A
V
P. TIGA
P. TENGA
P. TOENDONIA
P. MOLOS
G. KAILI
G. TOENDENBA
G. MOJAKAT
G. MENDENG
G. BOENGOENDAN
G. SIMBALANG
G. GEMANTANG
G. DELOETALOGON
G. TOLIBAN
G. PANGALIAN
G. MOLDROK
G. DESIDESING
G. KOLADOEN
G. TOBAYANDLAMBOIT
G. KASILA
G. INDESALAM
G. TOPALI
G. BOEMBOENGAN
G. MAISELOE
G. KONAKEN
G. MOPARAH
G. PINOMAIAN
G. KINALIAN
G. NOLINGONGOT
G. BOESJET
G. TAMBALAGI
G. BOEBOEDELAA
G. TAPANONDAGE
G. HONGONDOK
G. MOLOTOENG
G. DOGEAN
G. MUNGKORO
G. MOKENALA
G. LEMBEH
G. TAMBOELOE
G. LEMBEHAN
G. MAKIKIT
G. LEMBEHAN
G. TOENDOLIAN
G. LEMBEHAN
G. MANDASI
G. LIWOE
G. BOLONGI
G. BANKA
G. KARIM
G. BALONGKA
G. TOENDOLIAN
G. TOENDOLIAN
G. BOENTALOE
G. TOENDOLIAN
G. TOENDOLIAN
G. TOENDOLIAN

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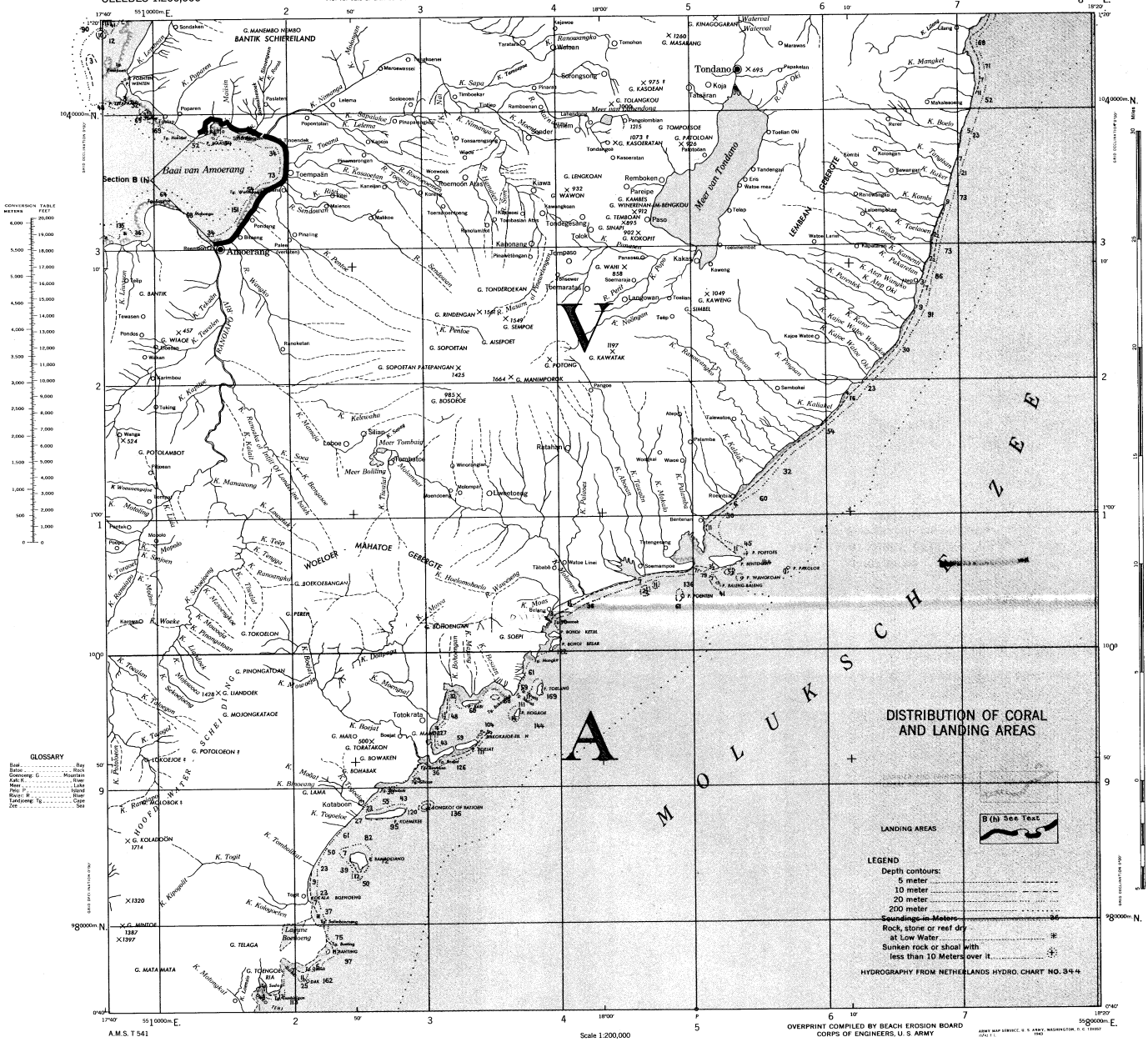
AMOERANG

SECOND EDITION-AMS 2

SHEET 90-91/XV-XVI



CONVERSION TABLE METERS FEET

GLOSSARY

Baai	Bay
Batoe	Rock
Gebergte, G	Mountains
Kali, K	Stream
Meer	Lake
Pelo, P	Island
Rivier, R	River
Tandjoeng, Tg	Cape
Zee	Sea

OVERPRINT COMPILED BY BEACH EROSION BOARD CORPS OF ENGINEERS, U. S. ARMY

ARMY MAP SERVICE, U. S. ARMY, WASHINGTON, D. C. 1943

A.M.S. T 541

First Edition 1942
Second Edition 1943

Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service ELDD , U. S. Army, Washington, D. C., 1943. Compiled and drafted from Road Map of Minahasa, 1:600,000; Geologische Schetskaart van den Noordarm Van Celebes, 1:200,000; Schetskaart Van De Minahasa, 1:200,000 by the Army Map Service, Washington, D. C., 1943.

Scale 1:200,000

5 0 5 10 Miles
5 0 5 10 15 Kilometers

INDEX TO ADJOINING SHEETS

The entire area of this sheet falls within Menado Afdeeling of Minado Residency.

HEIGHTS IN METERS
CONTOUR INTERVAL 100 METERS

POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)

Projection:	Lambert Conical Orthamorphic
Schemod:	Bessel
Origin:	Equator and 110° E
False Co-ordinates:	3,900,000 Meters East
Of Origin:	900,000 meters North
Scale Factor:	.997

Meridian of Batavia (which is 106°48'27.79" E. of Greenwich)

NOTE: OFFICERS USING THIS MAP WILL MARK NEROM CORRECTIONS AND ADDITIONS WHICH COME TO THEIR ATTENTION AND MAIL DIRECT TO THE CHIEF OF ENGINEERS, WASHINGTON, D. C.

APPROXIMATE MEAN DECLINATION 1943 FOR CENTER OF SHEET ANNUAL MAGNETIC CHANGE 2' INCREASE

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the north edge of the map with the center of the compass rose and magnetic north, as plotted on the angular scale of the north edge of the map.

TO GIVE A GRID REFERENCE ON THIS SHEET

LETTER Must be used for this sheet. Obtain from key or map or from square FIGURES GIVING the SMALLER figure printed near the check corners. Three are for finding the full co-ordinates, viz. 12450000

USE ONLY THE LARGER FIGURES PRINTED IN THE MARGIN OR ON THE FACE OF THE MAP, viz. 1248000

FIRST	LETTER V	
Read	Both	
Low Water MAP of square in which point (or, and mid) the figure printed against the line on North or South margin of the MAP, or the foot of the map. Formerly North Eastward	N	2
	Both	
Take South edge of square or which point (or, and mid) the figure printed against the line on East or West margin of the MAP, or the top MAP on the foot of the map. Formerly North Northward	E	1
Last	00	01

REFERENCE to SHEETS — To record 1000 meters

Dot	-	-	Metre
Square	-	-	1/100 metre
Square corner reference of the grid			1/10 mm.

AMOERANG, CELEBES
N040-E12428/40 (GREENWICH)

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

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Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

CELEBES 1:200,000

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MĒNADO

SECOND EDITION-AMS 2

PLAN NO. 55
JANIS 155
SHEET 90-91-92/XIII-XIV

DISTRIBUTION OF CORAL AND LANDING AREAS

LANDING AREAS B (g) See Text

LEGEND
Depth contours:
5 meter
10 meter
20 meter
200 meter
Soundings in meters
Rock, stone or reef dry at Low Water
Sunken rock or shoal with less than 10 Meters over it

HYDROGRAPHY FROM NETHERLANDS HYDR. CHART NO. 344

CONVERSION TABLE METERS FEET

GLOSSARY

Section B (a)
Section B (b)
Section B (c)
Section B (d)
Section B (e)
Section B (f)
Section B (g)

BAAI VAN MENADO
MĒNADO
BAAI VAN TANAWANGKO
BAAI VAN LEMBEH
CELEBES
MOLUKSCHE ZEE

Scale 1:200,000

A.M.S. T 541
First Edition 1942
Second Edition 1943

Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service (LCY), U. S. Army, Washington, D. C., 1943. Compiled and drafted from Road Map of Minahassa, 1:200,000, Schaalkaart van de Residentie van Celebes, 1:200,000; Schaalkaart van de Residentie, 1:200,000 by the Army Map Service, Washington, D. C., 1943.

LEGEND
Hard Surface Road
Improved Motor Road
Unimproved Motor Road
Trails
Trail
Residency Boundary
Division Boundary
Primary City
Secondary City
Town
Village or Settlement
Division Point

INDEX TO ADJOINING SHEETS

The entire area of this sheet is within Menado, Residency of Menado.

HEIGHTS IN METERS
CONTOUR INTERVAL 100 METERS
POLYCONIC PROJECTION

N. E. I. EQUATORIAL ZONE GRID (Blue)
Projection: Lambert Conical Orthomorphic
Spheroid: Bessel
Origin: Equator and 110° E
False Co-ordinates: 3,900,000 Meters East
Of Origin: 900,000 meters North

Use diagram only to obtain numerical values. To determine magnetic north line, connect the pivot point "P" on the south edge of the map with the value of the angle between grid and magnetic north, as plotted on the degree scale at the north edge of the map.

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CORPS OF ENGINEERS, U. S. ARMY

MĒNADO, CELEBES
N 120-E 12428/40 X 49 (GREENWICH)

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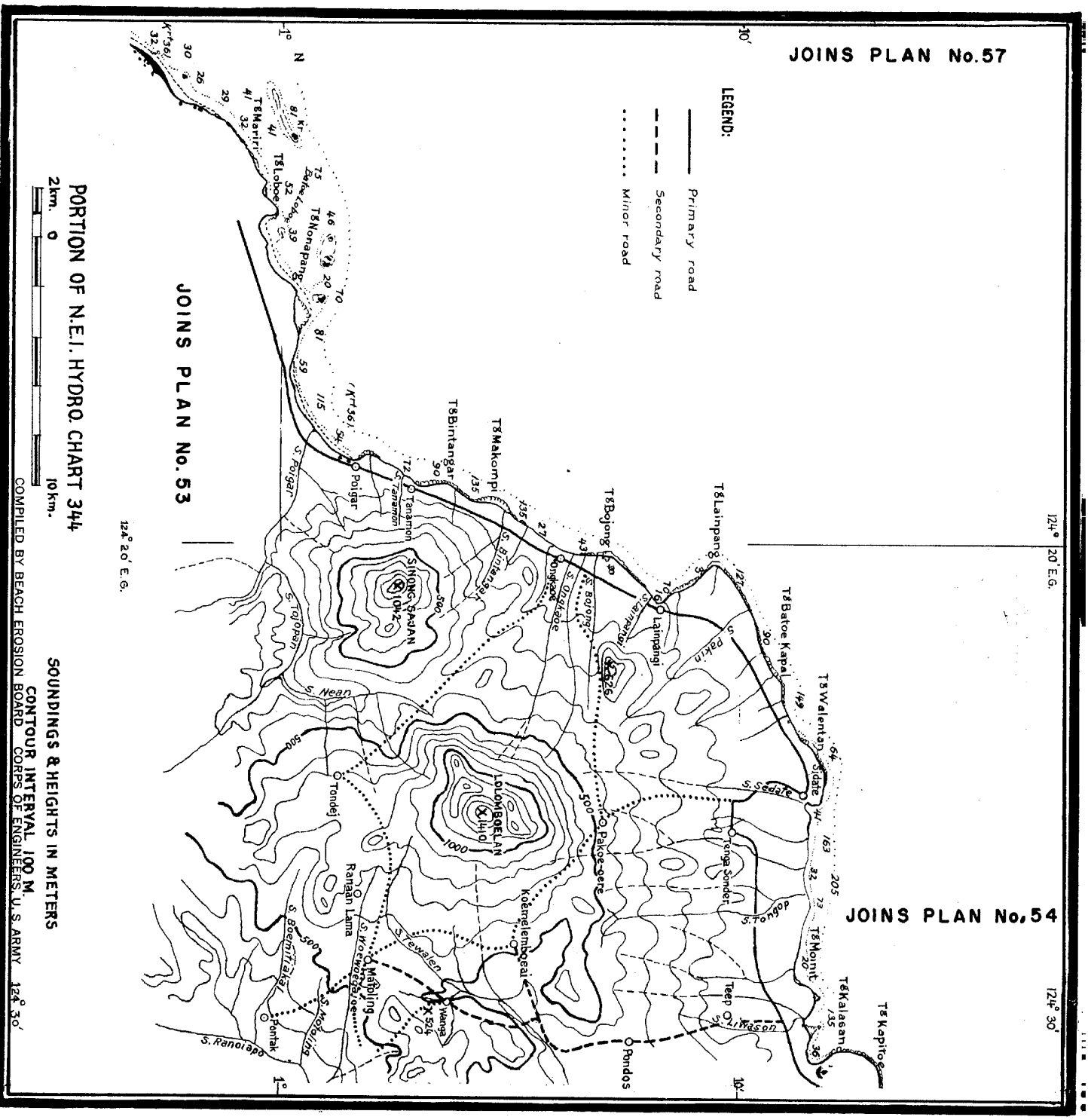

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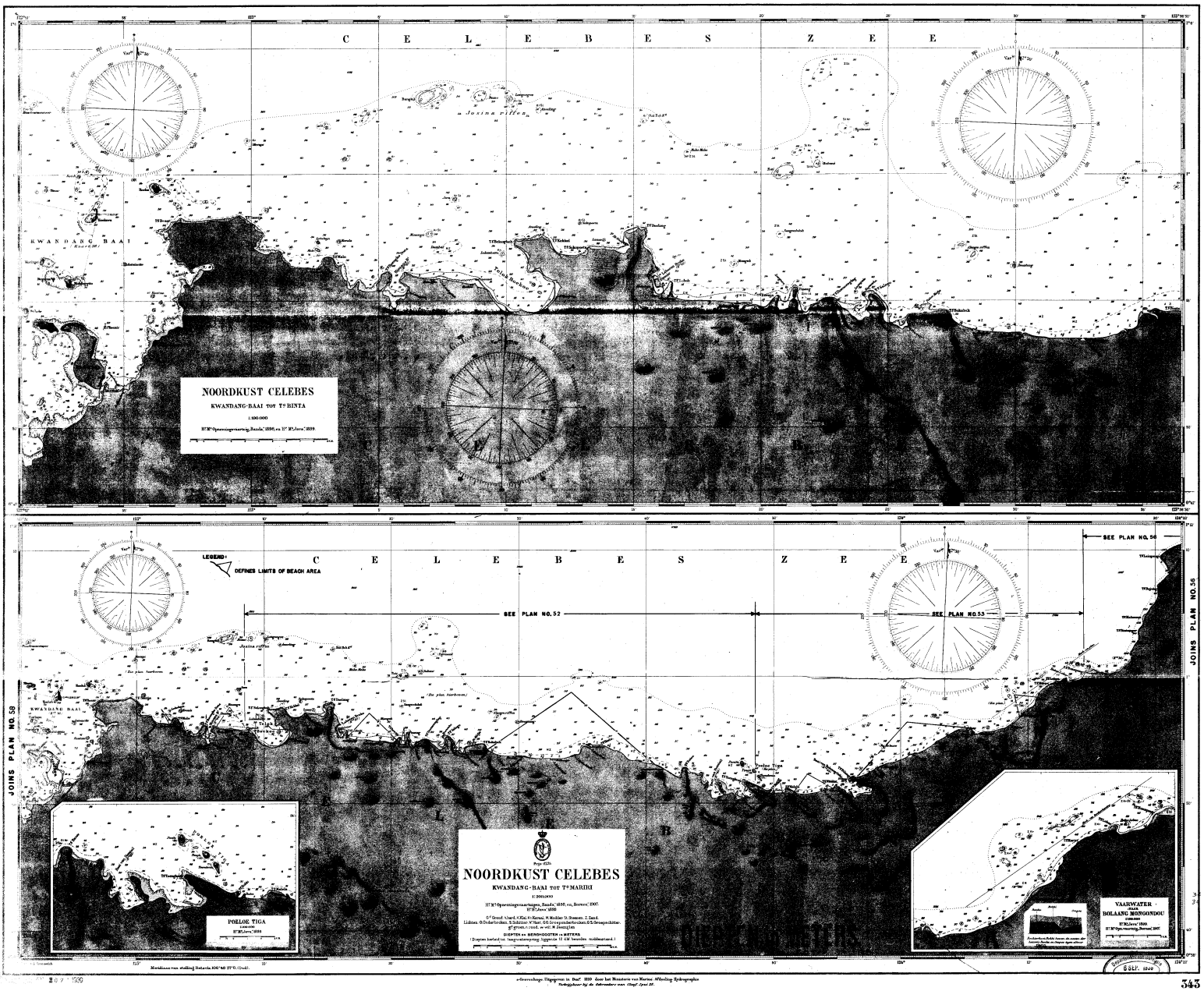

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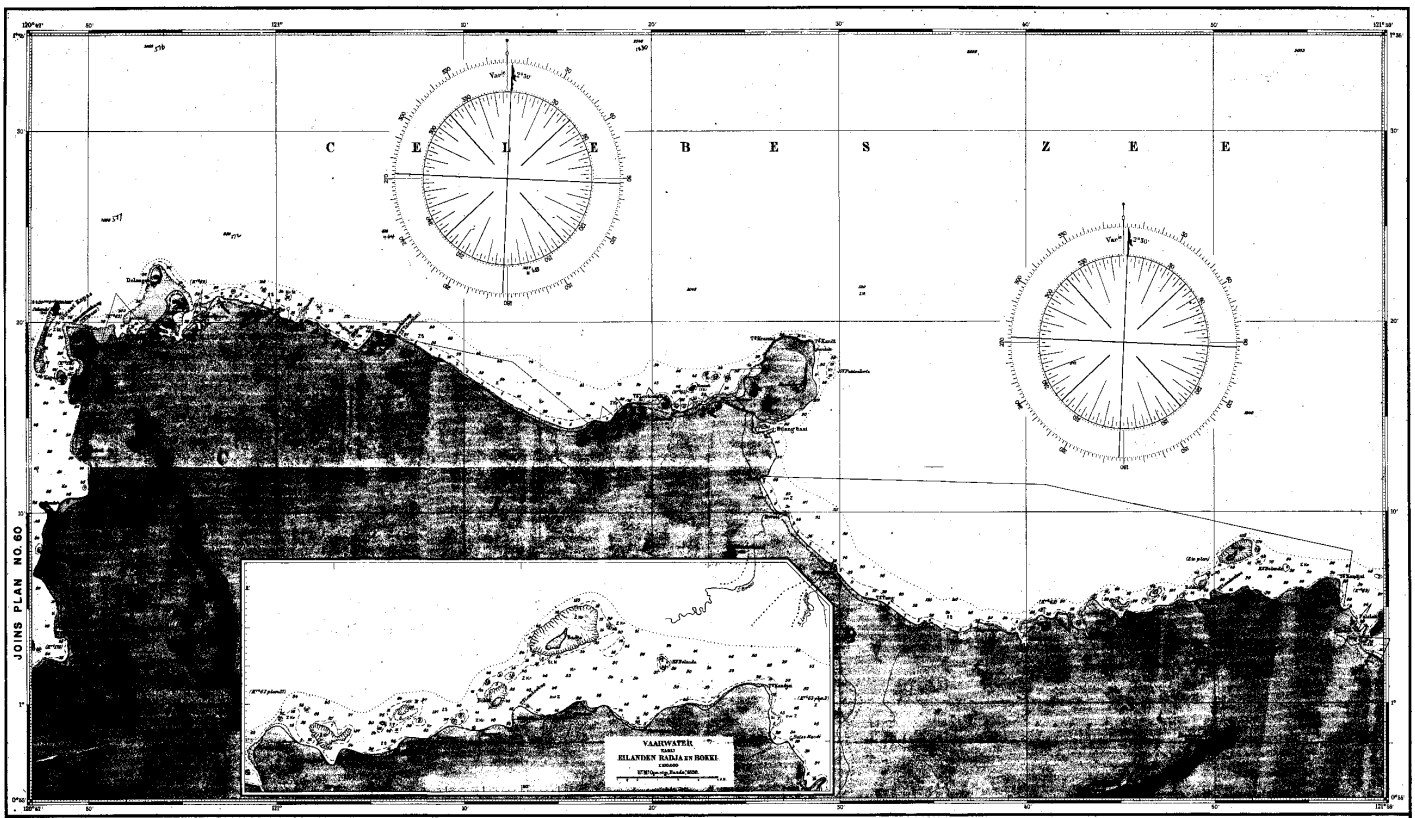
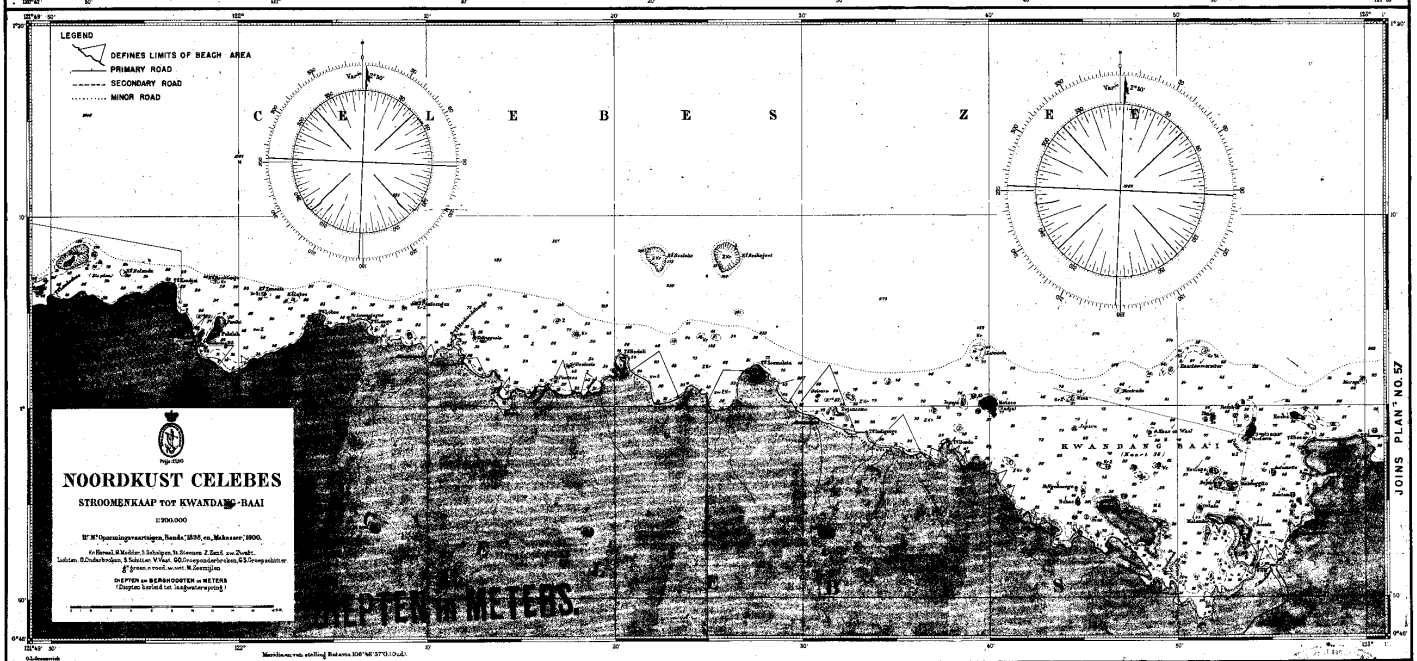
CONFIDENTIAL

CONFIDENTIAL
Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PLAN NO. 58
JANIS 155





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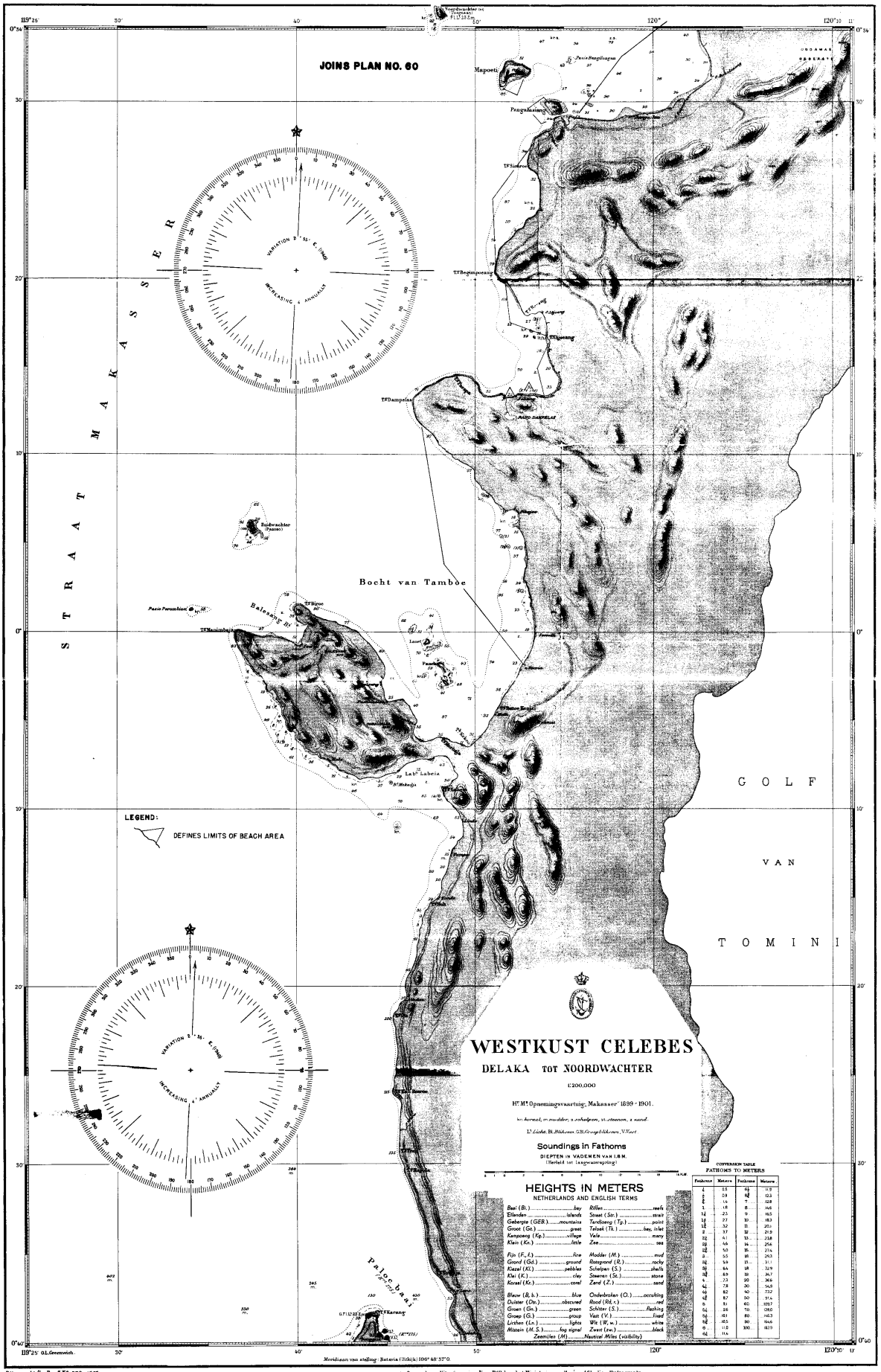
CONFIDENTIAL
Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2



Afgewerkt Nr. B.z. 2.N.° 279 - 1937
's-Gravenhage Uitgegeven in Nov. 1939 door het Ministerie van Marine Afdeeling Hydrographie
Verkrijgbaar bij de Gebroeders van Cleef Spui 28.°

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2
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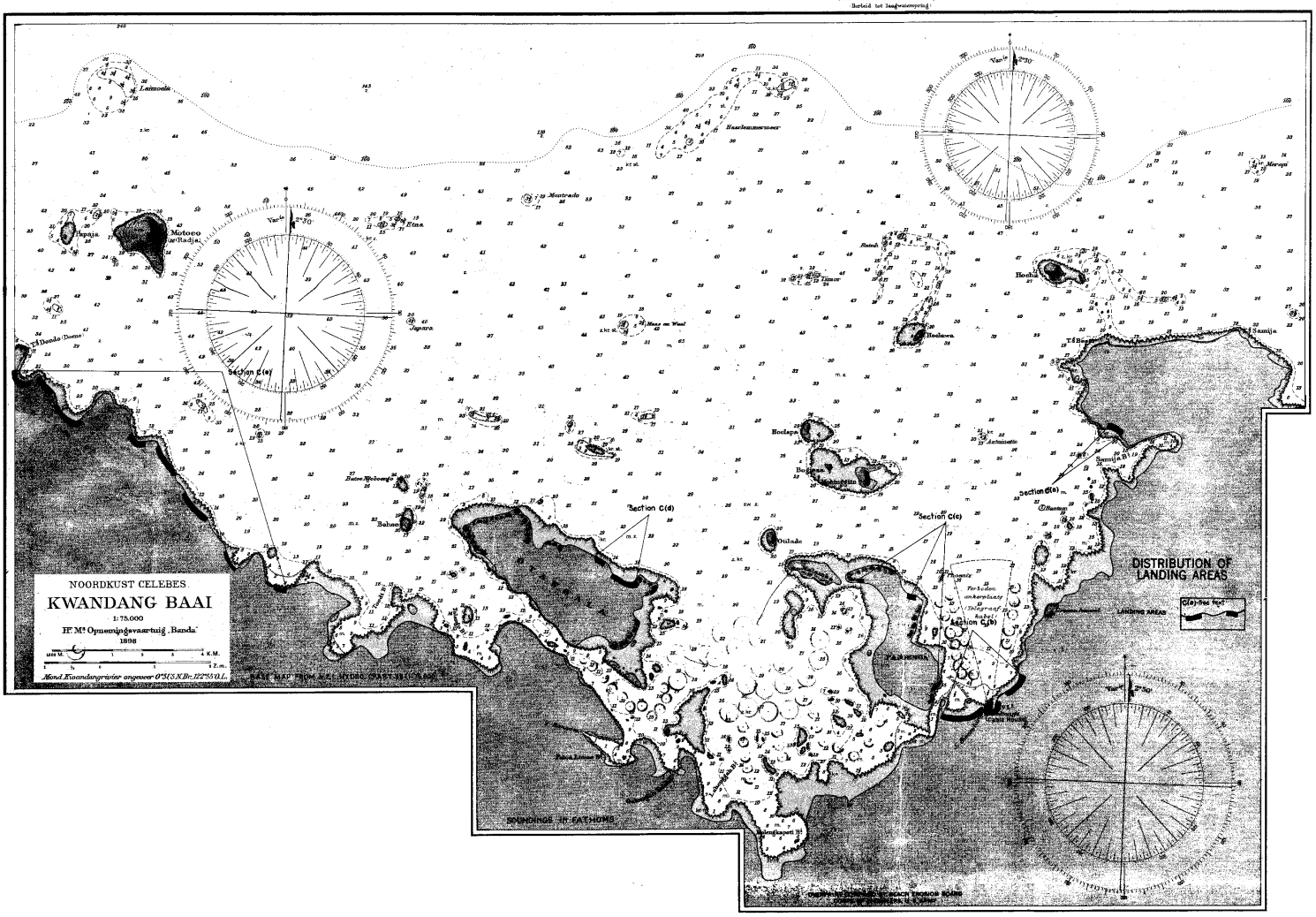
Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

PLAN NO. 59
JANIS 155

VAARWATERS EN ANKERPLAATSEN OP DE NOORD- EN NOORDOOSTKUST VAN CELEBES



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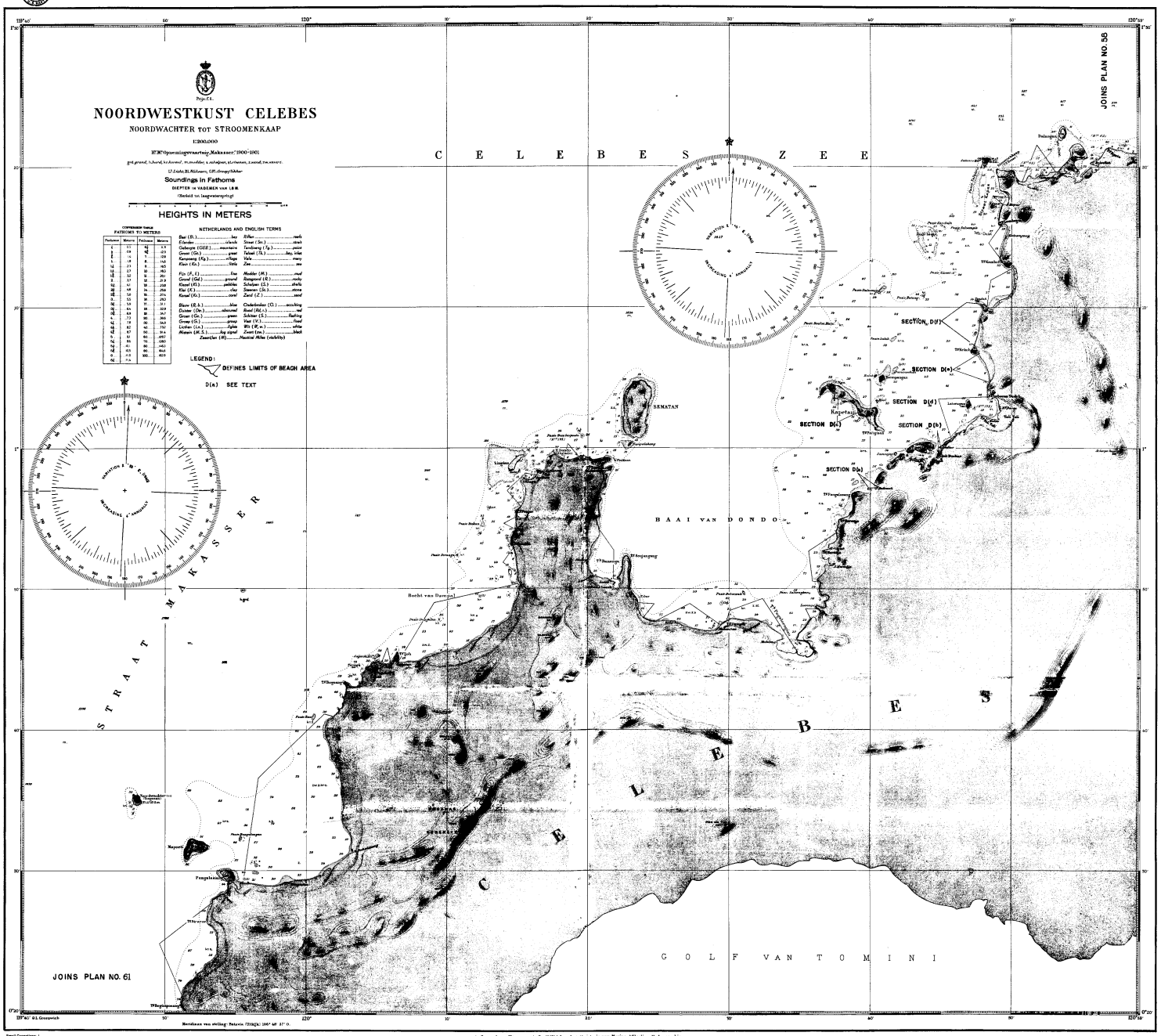
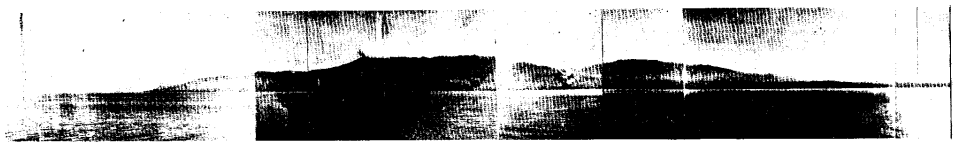
Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2

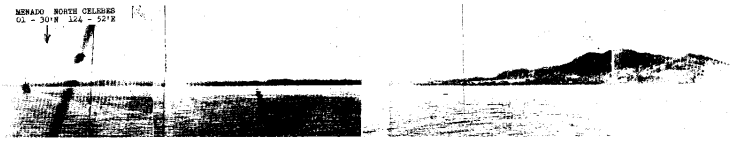
EMERGENCY REPRODUCTION OF NETHERLANDS CHART.


NOORDWESTKUST CELEBES
NOORDWACHTER TOT STROOMENKAAP
1:200.000
Soundings in Fathoms
DIEPTEN in VADEMEN van 1.8 M.
HEIGHTS IN METERS
NETHERLANDS AND ENGLISH TERMS
LEGEND:
DEFINES LIMITS OF BEACH AREA
D(a) SEE TEXT
JOINS PLAN NO. 56
JOINS PLAN NO. 61
C E L E B E S Z E E
S T R A A T M A K A S S E R
B A A I V A N D O N D O
G O L F V A N T O M I N I
C E L E B E S
SEMATAN
Boeht van Dawoan
SECTION D(f)
SECTION D(e)
SECTION D(d)
SECTION D(c)
SECTION D(b)
SECTION D(a)

Approved For Release 2006/11/13 : CIA-RDP79-01144A002600010001-2
CONFIDENTIAL

PLAN NO. 62
JANIS 155

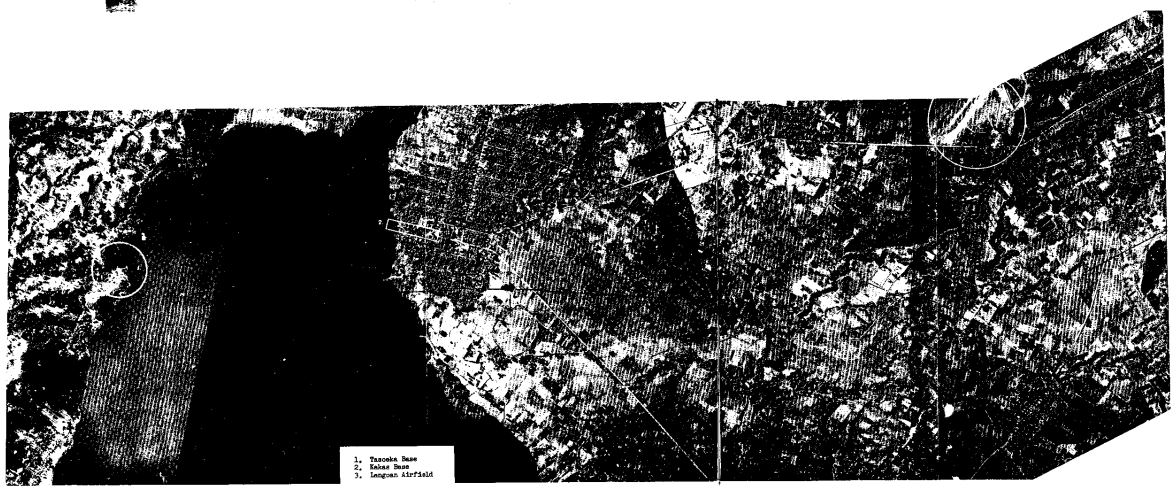


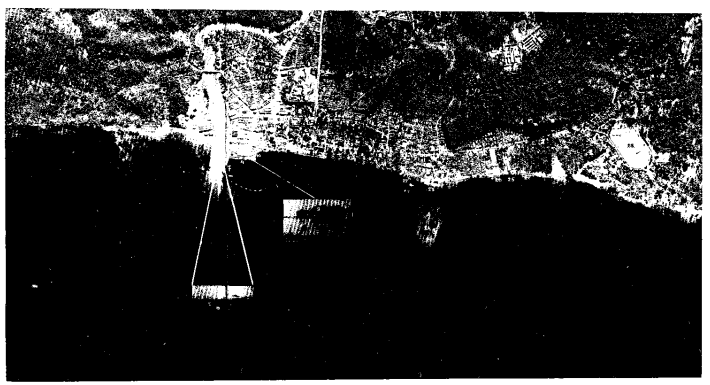


MANADO HARBOR

1. Road to Kema
2. Singeli Bridge
3. Copra Sheds
4. K. P. M. Sheds
5. Japanese Slip-way
6. North Jetty
7. South Jetty
8. Praa Harbor
9. Roomy Sacre House
10. Mohrsan Trading Company
11. City Hall
12. Fort "Amsterdam" Barracks
13. Clubhouse
14. Queen Wilhelmina Hospital
15. Wilhelmina Hotel
16. Government Office Building
17. Prison
18. Church
19. Telephone Building
20. Post Office
20 (a) School
21. House of the Resident
22. Cable House
23. B. P. M. Tanks and Storage Shed
24. Sario Reef
25. Hospital
26. Manado Produce Company
27. Barracks

28. Sports Ground





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